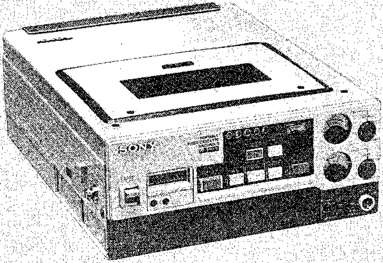
U-matic S

PORTABLE VIDEOCASSETTE RECORDER

VO-6800

Revised- 2



SONY®

SERVICE MANUAL

SPECIFICATIONS

General

Power requirements	12V dc
Power consumption	DC 15.5 W
Connectors	VIDEO IN: BNC type, × 1 CAMERA: Q type, 14-pin × 1 VIDEO OUT: BNC type × 1 AUDIO IN CH-1/L/DUB and AUDIO IN CH-2/R: XLR type, female, × 1 AUDIO OUT MONI (CH-1/L) and AUDIO OUT CH-2/R: XLR type, male, × 1 DC IN 12 V: XLR type, × 1 RF OUT: F type REMOTE: Special mini type
Operating position	Both vertical and horizontal
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	−20°C to +60°C (−4° F to +140°F)
Dimensions	Approx. 258 × 117 × 338 mm (w/h/d) (10¼ × 4⅝ × 13⅜ × inches) not incl. projecting parts and controls
Weight	Approx. 5.5 kg (12 lb 2 oz)

Video

Video head	Rotary 4 head (R/P: 2 Simultanceous playback: 2)
Video recording system	Helical scanning, FM recording
Video signal system	EIA standards, NTSC color signal
Input	Composite, sync negative 1 V (p-p) $^{+1.0}_{-0.5}$ V (p-p), 75 ohms, unbalanced
Output	Composite, sync negative 1 V (p-p)±0.2 V(p-p), 75 ohms, unbalanced
Horizontal resolutions	260 lines
Signal to noise ratio	Color: Better than 45 dB

Audio

Input	CAMERA (microphone input): −20 dB/−60 dB switchable, more than 3-kohm impedance, balanced AUDIO IN CH-1/L/DUB and AUDIO IN CH-2/R: Line input: +4 dB, More than 10-kohm impedance, balanced Microphone input: −60 dB, More than 3-kohm impedance, balanced
Output	AUDIO OUT MONI (CH-1/L) and AUDIO OUT CH-2/R: +4 dB (at 600 ohm load), balanced EARPHONE: −20 to −33 dB (at 8 ohm load), adjustable
Signal to noise ratio	Better than 50 dB
Frequency response	50 Hz - 15,000 Hz

Tape transport

Tape speed	9.53 cm/sec. (3.75 ips)
Wow and flutter	Less than 0.2 % rms
Recording time	20 min. continuously with KCS-20, 10 min. continuously with KCS-10
Rewind and fast forward time	Within 3 min. (KCS-20)
Operating time	Approx. 1 hour continuously to a DXC-M3 camera and the recorder, with two NP-1 fully charged batteries
Interchangeability	Fully interchangeable with all conventional U-matic recorder/player
Usable tape	KCS type tape

Special functions

Simultaneous playback picture and tape remaining time indication	Possible with a camera having the return video function
Pause	Possible
Search	Possible (about 10 times of normal speed in forward and reverse directions)
Edit	Audio dubbing
Tracking control	Possible
Remote control	Recording, playback, fast forward, rewind, pause and stop, with an optional RM-680 remote control unit

Accessories supplied

Carrying case (soft)	1
Shoulder strap	1
CCQX-2 (2 m, 6 feet) cable for the CMA-8 camera adaptor	1
Earphone ME-20H	1

Design and specifications subject to change without notice.

Optional accessories

- CMA-8 camera adaptor
- BC-1WA battery charger
- RM-680 remote control unit
- AH-6800 handle
- NP-1 rechargeable battery
- RFK-634 RF modulator
- KCS-10, KCS-20 video cassette tape
- KCS-1C cleaning cassette
- CMA-203 camera adaptor
- Color video camera DXC-1800, DXC-1820/1821, DXC-M3, DXC-M3A, etc.

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SECTION 1

GENERAL DESCRIPTION

1-1. FEATURES

The lightweight and compact Sony VO-6800 U-matic Ⓢ video cassette recorder is designed for portable use. When used together with a Sony color video camera, the VO-6800 recorder is ideally suited for news gathering and outdoor recording.

Portability and versatility
The lightweight, compact VO-6800 is designed for portable use. It may be operated in either a vertical or a horizontal position. The recorder is free of gyroscopic distortion.

Video confidence
The simultaneous playback picture (the picture which has just been recorded) can be monitored on the camera viewfinder if a camera equipped with a return video button is used together. You can check whether or not the recording has been correctly made.

Protect against the accidental recording interruption
During the camera recording, if the camera is connected to the 14-pin CAMERA connector, only the STOP and EJECT buttons can function. All other buttons are disabled so that the recording will not be interrupted accidentally.

Warning system
The warning lamps blink or light to tell the operator at a glance that the auto shut-off mechanism is functioning due to the end of tape, battery discharge, etc. An audible alarm will sound simultaneously through the earphone. When a camera equipped with a Sony Q type (14-pin connector is used, the warning lamps in the viewfinde will blink in unison with the warning lamps on the recorder.

Tape remaining time indication
The tape remaining time can be checked on the camera viewfinder screen if a camera equipped with a return video button is used together.

Easy battery replacement
The battery can be easily inserted and removed. In addition, an independent meter is provided for checking the battery condition.

Smooth transition between scenes
Video cassette programs are composed shot-by-shot without any irregularities at scene changes because the quick playback servo system guarantees a clean cut every time.

Two video source assembly
Two video sources can be assembled by switching the VIDEO IN selector.

Audio dubbing
Audio (commentary, music, etc.) can be added to a previous video recording.

Logic control
The logic control system allows you to change modes without pressing the STOP button.

Two way power operation
This recorder may be powered by the Sony NP-1 rechargeable battery pack (optional) or the CMA-8 camera adaptor (optional) for ac power.

Pause mode
The tape may be momentarily stopped in record, dubbing audio or playback mode. A still picture may be obtained in the playback and audio dubbing pause modes.

Real time counter
The time counter reads the CTL signals recorded on the tape and an LCD (Liquid Crystal Display) display indicates the point on the tape in seconds and minutes.

Playback on a conventional TV receiver
Playback can be performed on a conventional TV receiver by means of an optional RF unit.

High quality audio signal recording
The sendust audio head permits audio recording with high frequency response.

Auto or manual audio recording
While recording, the audio level can be controlled manually (recording with a limiter) or automatically.

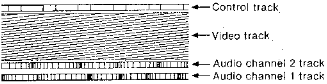
Picture search
Pictures can be monitored during the rewind and fast forward modes.

External sync system
The recorder will operate with an external sync system when the video signal is connected to the VIDEO IN connector during playback.

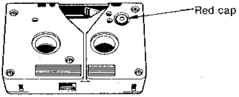
1-2. NOTES ON VIDEO CASSETTE

Usable cassette
Always use a KCS type video cassette, KCS-20, KCS-10 or equivalent.

Recording format
Because the full width of the tape is used for recording the picture and sound, the tape is recorded in one direction only.



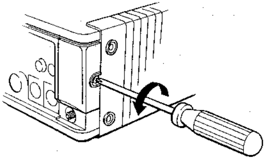
Safety cap on the bottom
Video cassette ▤ incorporates a convenient safety device to prevent accidental erasure.
To safeguard the material recorded on a cassette, remove the red cap on the bottom of the cassette. To record on this cassette later, replace the cap.



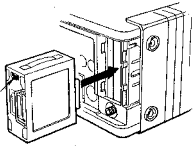
1-3. RF UNIT INSTALLATION AND SETTING

RF unit installation and setting
Install an RF unit (optional) to monitor the playback signal from the recorder on a TV receiver.

1 Open the cover of the RF unit compartment.



2 Set the channel selector on the RF unit to channel 3 or 4, whichever is inactive in your area.
3 Install the RF unit.

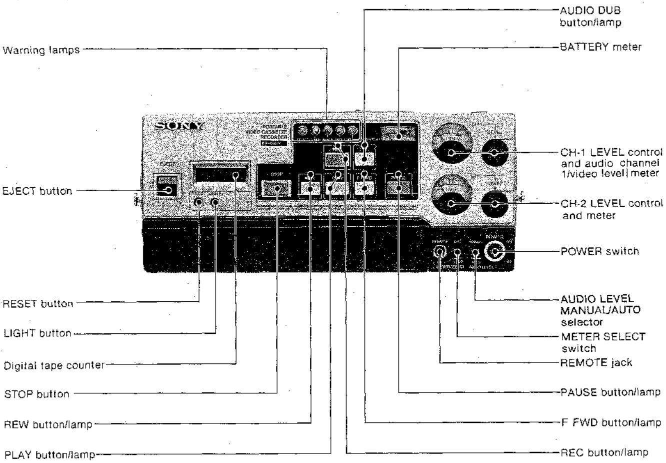


Set to the channel which is inactive in your area.

4 Close the cover.

1-4. LOCATION AND FUNCTION OF CONTROLS

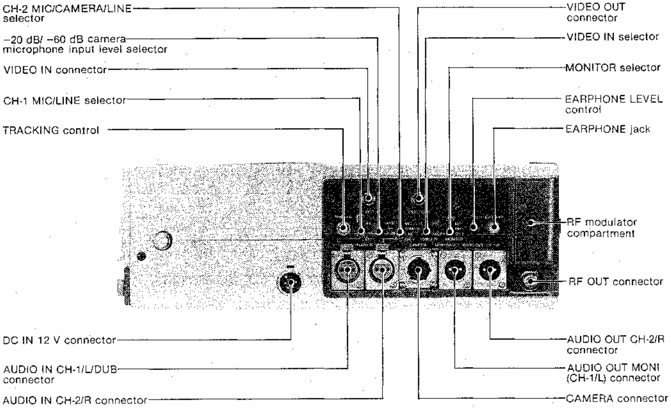
CONTROL PANEL


Warning lamps
EJECT button
RESET button
LIGHT button
Digital tape counter
STOP button
REW button/lamp
PLAY button/lamp
AUDIO DUB button/lamp
BATTERY meter
CH-1 LEVEL control and audio channel 1/video level meter
CH-2 LEVEL control and meter
POWER switch
AUDIO LEVEL MANUAL/AUTO selector
METER SELECT switch
REMOTE jack
PAUSE button/lamp
F FWD button/lamp
REC button/lamp
SONY

PICTURE SEARCH

You can search for a particular picture by pressing either the F FWD or REW button (picture search). The picture will be displayed with the guard band noise.

CONNECTOR PANEL


CH-2 MIC/CAMERA/LINE selector
−20 dB/ −60 dB camera microphone input level selector
VIDEO IN connector
CH-1 MIC/LINE selector
TRACKING control
DC IN 12 V connector
AUDIO IN CH-1/L/DUB connector
AUDIO IN CH-2/R connector
VIDEO OUT connector
VIDEO IN selector
MONITOR selector
EARPHONE LEVEL control
EARPHONE jack
RF modulator compartment
RF OUT connector
AUDIO OUT CH-2/R connector
AUDIO OUT MONI (CH-1/L) connector
CAMERA connector

−20dB/−60dB CAMERA MICROPHONE INPUT LEVEL SELECTOR

Setting examples

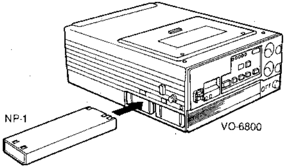
Camera used	Selector setting
DXC-1800	−60 dB
DXC-1820	−60 dB
DXC-M3	−60 dB
DXC-M3A	−20 dB or −60 dB

1-5. POWER SOURCES

The VO-6800 video cassette recorder can operate either from one or two rechargeable battery pack(s) NP-1 or from an ac power source using a CMA-8 camera adaptor (optional).

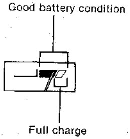
BATTERY

Installation
Insert one or two battery pack(s) as illustrated.



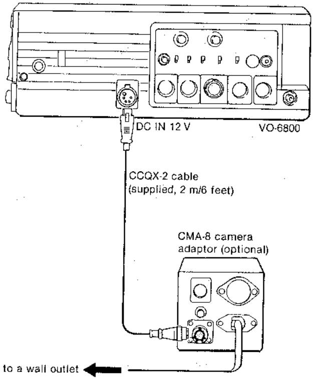
To remove
Press the EJECT button above the battery compartment.

Battery life
A fully charged battery provides approximately half hour of continuous operation when used together with the DXC-M3 camera. With two batteries, the operation time will be 1 hour. The BATTERY meter indicates battery condition. If the pointer approaches the left end of the black zone, replace the battery with a fully charged one. When the voltage of the NP-1 falls below its rated value, the BATTERY lamp will blink, and after several minutes, the recorder will automatically stop.
If the recorder is set in the record or playback mode using a battery having a low terminal voltage, it will not operate.


Good battery condition
Full charge

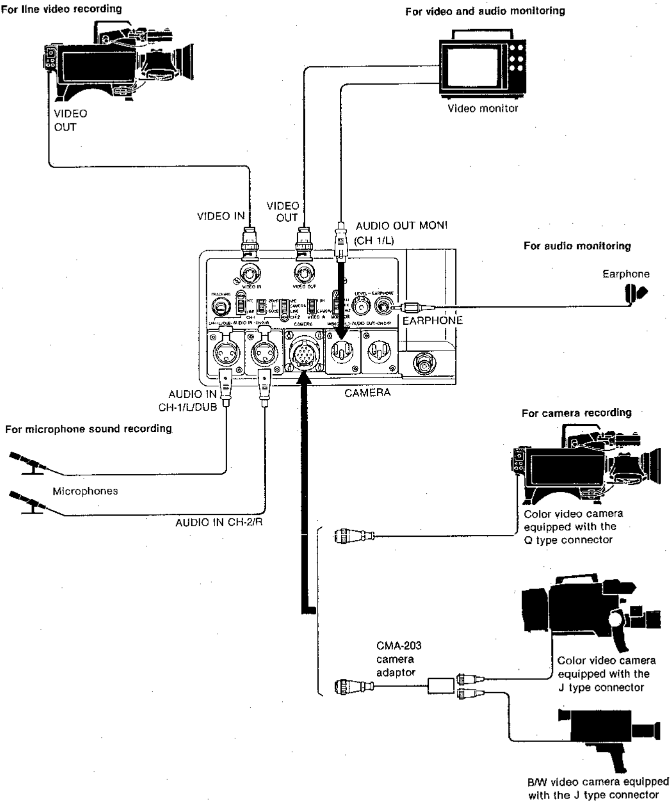
AC POWER

Connect the CMA-8 camera adaptor (optional) as illustrated.


DC IN 12 V
VO-6800
CCQX-2 cable
(supplied, 2 m/6 feet)
CMA-8 camera
adaptor (optional)
to a wall outlet

1-6. CONNECTIONS

CAMERA RECORDING


For line video recording
VIDEO OUT
For video and audio monitoring
Video monitor
VIDEO IN
VIDEO OUT
AUDIO OUT MONI (CH 1/L)
For audio monitoring
Earphone
EARPHONE
AUDIO IN CH-1/L/DUB
CAMERA
For microphone sound recording
Microphones
AUDIO IN CH-2/R
For camera recording
Color video camera equipped with the Q type connector
CMA-203 camera adaptor
Color video camera equipped with the J type connector
B/W video camera equipped with the J type connector

Pause operation

To stop the tape momentarily during camera recording, press the remote control switch on the camera or the PAUSE button on the recorder. The PAUSE lamp on the recorder will blink during the pause mode. The E-to-E mode signal will remain displayed on the monitor connected to the recorder.

To release the pause mode, press the remote control switch on the camera or the PAUSE button on the recorder again.

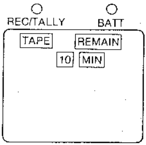
- If the recording has been started with the PAUSE button on the recorder, it can be stopped with the PAUSE button and also with the remote control switch on the camera.
- If the recording has been started with the remote control switch on the camera, it can be stopped only with the remote control switch. The PAUSE button cannot stop recording.
- The pause mode will be automatically released after about 8 minutes of use, and the recorder will set in the stop mode, in order to protect the tape and the video heads.

To check the video signal being recorded (simultaneous playback picture)

To check whether or not the camera recording is correctly made, press the return video button on the camera. While the return video button is pressed, the simultaneous playback picture is displayed on the viewfinder screen, with the tape remaining time indication.

Tape remaining time indication

During recording, while the return video button on the camera is pressed, the tape remaining time is displayed on the simultaneous playback picture.



Tape remaining time	20	15	10	5	4	3	2	1.5	0 min.
Indication	15 MIN	10 MIN	5 MIN	4 MIN	3 MIN	2 MIN	1 MIN	TAPE BEFORE END	*

* The indication disappears.

If the tape will not run in the record mode

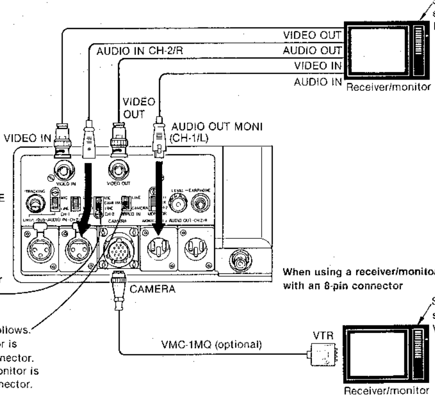
The tape will not run if a video signal is not supplied. If this happens, check the pointer of the CH-1 LEVEL meter. When the METER SELECT switch is set to VIDEO, it should be in the blue zone, indicating a sufficiently strong video signal.

Stereo sound recording

To record stereo sound, connect the microphones to the AUDIO IN CH-1/L/DUB and CH-2/R connectors. Set the CH-1 MIC/LINE and CH-2 MIC/CAMERA/LINE selectors to MIC.

When the microphone is connected to the AUDIO IN CH-2/R connector, the microphone built into, or connected to, the camera will be automatically disconnected.

RECORDING TV PROGRAMS


VIDEO OUT
AUDIO OUT
VIDEO IN
AUDIO IN
Receiver/monitor
AUDIO IN CH-2/R
VIDEO OUT
AUDIO OUT MONI (CH-1/L)
VIDEO IN
CAMERA
VMC-1MQ (optional)
VTR
Receiver/monitor

When using a receiver/monitor not equipped with an 8-pin connector

Set the input selector to LINE.

When using a receiver/monitor equipped with an 8-pin connector

Set the input selector to VTR.

Set the CH-2 MIC/CAMERA/LINE selector to the appropriate position:
CAMERA: When the receiver/monitor is connected to the CAMERA connector
LINE: When the receiver/monitor is connected to the AUDIO IN CH-2/R connector.

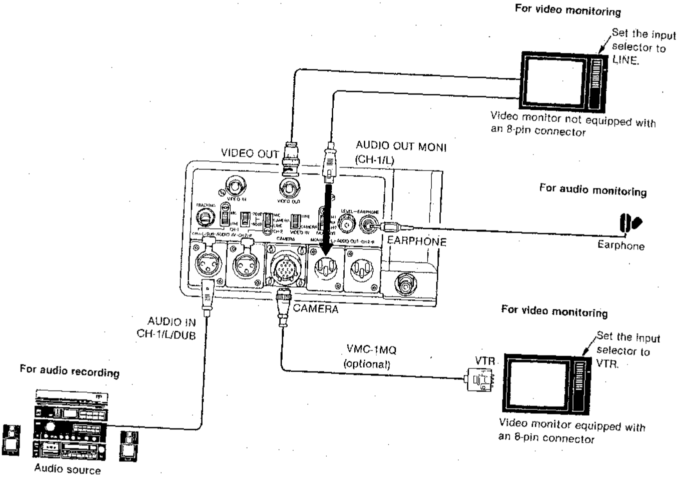
Set the VIDEO IN selector as follows.
LINE: When the receiver/monitor is connected to the VIDEO IN connector.
CAMERA: When the receiver/monitor is connected to the CAMERA connector.

Caution

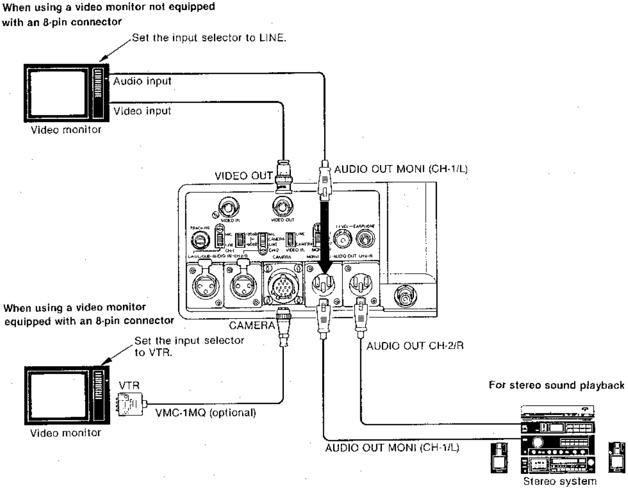
Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.

AUDIO DUBING

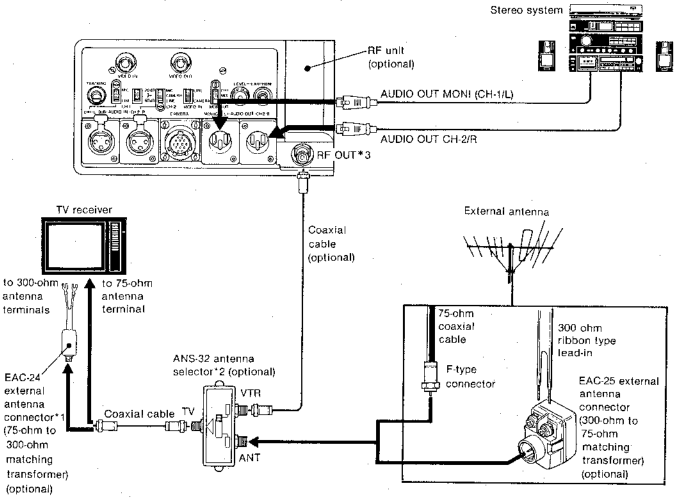
New sound can be recorded onto a prerecorded tape. The audio dubbing will be made on the audio channel 1 track.


For video monitoring
Set the input selector to LINE.
Video monitor not equipped with an 8-pin connector
VIDEO OUT
AUDIO OUT MONI (CH-1/L)
For audio monitoring
EARPHONE
Earphone
CAMERA
For video monitoring
Set the input selector to VTR.
VTR
VMC-1MQ (optional)
Video monitor equipped with an 8-pin connector
AUDIO IN CH-1/L/DUB
For audio recording
Audio source

PLAYBACK ON A MONITOR


When using a video monitor not equipped with an 8-pin connector
Set the input selector to LINE.
Audio input
Video input
Video monitor
VIDEO OUT
AUDIO OUT MONI (CH-1/L)
When using a video monitor equipped with an 8-pin connector
CAMERA
Set the input selector to VTR.
AUDIO OUT CH-2/R
VTR
VMC-1MQ (optional)
Video monitor
For stereo sound playback
AUDIO OUT MONI (CH-1/L)
Stereo system

PLAYBACK ON A CONVENTIONAL TV RECEIVER


Stereo system
RF unit (optional)
AUDIO OUT MONI (CH-1/L)
AUDIO OUT CH-2/R
RF OUT*3
TV receiver
Coaxial cable (optional)
External antenna
to 300-ohm antenna terminals
to 75-ohm antenna terminal
75-ohm coaxial cable
300 ohm ribbon type lead-in
F-type connector
ANS-32 antenna selector*2 (optional)
EAC-24 external antenna connector*1 (75-ohm to 300-ohm matching transformer) (optional)
Coaxial cable
TV
VTR
ANT
EAC-25 external antenna connector (300-ohm to 75-ohm matching transformer) (optional)

*1 If the TV receiver is equipped with a 75-ohm antenna terminal, connect the antenna selector ANS-32 (optional) directly to the receiver. If the TV receiver is equipped only with 300-ohm antenna terminals, connect the ANS-32 to the receiver through the EAC-24 (optional).

*2 Set the VTR/ANT switch:
VTR: To see the playback picture
ANT: To see the TV program

*3 **Caution**
Connection between the VO-6800 RF OUT connector and the antenna terminals of the TV receiver should be made only as shown in these instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of rf devices. Never connect the output of the VO-6800 to an antenna or make simultaneous (parallel) antenna and VO-6800 connections at the antenna terminals of the receiver.

1-7. WARNING SYSTEM

During recording, the warning lamps, earphone tone and camera (with the Q type connector) tally lamps serve to advise the operator of the following operational states.

Warning lamps		Earphone tone	State	Camera tally lamps		VTR operation
Lamp	Operation			REC/TALLY	BATT*2	
SERVO*1	◔ (While in the recording mode)	∧∧∧ ∧∧∧ ∧∧∧ ∧∧∧	Irregularity in servo	◔		Recording continues. Recording may not be performed correctly.
HUMID	○ (In all modes)	∧∧∧ ∧∧∧ ∧∧∧ ∧∧∧	Moisture condensation	◔		Recording continues, if the recorder is in the record mode, as long as the tape does not stick to the head drum. If this happens or the unit is in any of the other modes, the recorder will stop. Remove the cassette by pressing the EJECT button.
SLACK	◔ (In all modes)	∧∧∧∧∧∧∧∧∧∧∧∧	Tape slack	◔		Recording stops. Remove the cassette by pressing the EJECT button. If the cassette compartment will not raise, keep the recorder's power on and contact your authorized Sony dealer.
TAPE END	◒ (While in the recording mode)	∧∧∧	Near end	◒		Recording continues.
	○*3 (In all modes)	∧∧∧∧∧∧∧∧∧∧∧∧ *3	Tape end	◔*3		Recording stops. Change the cassette.
BATTERY	◒ (In all modes)	∧∧∧ (While in the recording mode)	Near end	◒	◒	Recording continues.
	○ (In all modes)	∧∧∧∧∧∧∧∧∧∧∧∧	Discharge	◔	○	Recording stops. Change the batteries.

Meaning of the marks

Lamps	Sound of alarm
◔ Blinks in 4 Hz	∧∧∧ 1 second interval
◒ Blinks in 1 Hz	∧∧∧ ∧∧∧ ∧∧∧ ∧∧∧ 1/4 second interval
○ Lights up	∧∧∧∧∧∧∧∧∧∧ Continuous sound

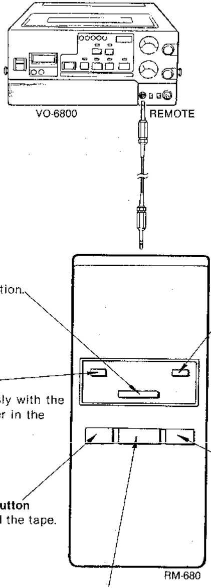
*1 If the SERVO lamp blinks, check the connections.

*2 The BATT tally lamp functions when the VTR's battery pack or the camera's battery pack are exhausted.

*3 After the recording stops, the lamp and the earphone tone will go off.

1-8. REMOTE CONTROL

With the RM-680 remote control unit (optional), operation can be remotely controlled from as far as 5 meters.



STOP button
Press to stop the operation.

PAUSE button
Press to momentarily stop the tape in the record or playback mode.

REC (record) button
Press this button simultaneously with the PLAY button to set the recorder in the record mode.

F FWD (fast forward) button/lamp
Press to advance the tape rapidly.

REW (rewind) button
Press to rewind the tape.

PLAY button
Press to play back the tape. To initiate a recording, press this button while pressing the REC button.

SECTION 2
SERVICE INFORMATION

2-1. CABINET REMOVAL PROCEDURES

. upper case

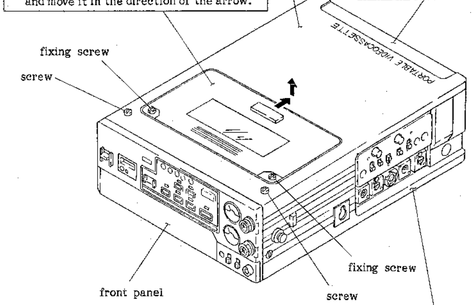
- Remove the rear panel.
- Loosen the two fixing screws, and remove the upper case.

. Cassette-up Compartment Upper Lid

- Remove the upper case.
  Put the Cassette-up Compartment into the raised state. Loosen the two fixing screws and move it in the direction of the arrow.

. rear panel

- Loosen the four fixing screws, and remove the rear panel.


fixing screw
screw
PORTABLE VIDEOCASSETTE
front panel
fixing screw
screw

. lower case

- Remove the rear panel.
- Loosen the four fixing screws, (two are on the sides, and the other two are on the bottom of the unit.)
- Disconnect Connector CN-703/PS-42Board.

2-2. CASSETTE-UP COMPARTMENT REMOVAL PROCEDURES

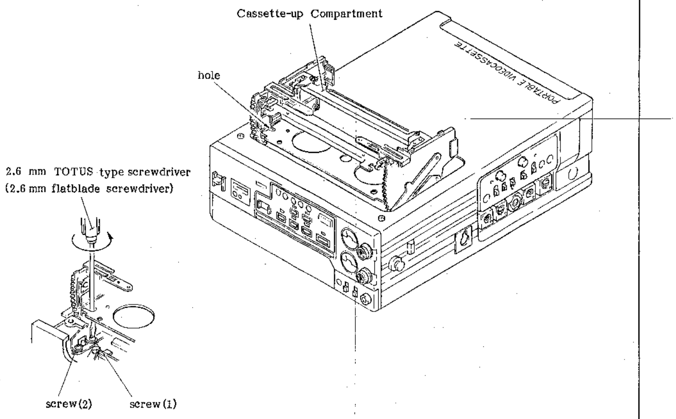
(1) Put the Cassette-up Compartment into the raised state.

(2) Remove the Cassette-up Compartment Upper Lid.

(3) Insert a 2.6 mm TOTUS ⊖ screwdriver (or a 2.6 mm flatblade screwdriver) into the left hole of the Cassette-up Compartment, as shown in the figure, and loosen the fixing screw (1) as shown in the detailed view. The fixing screws can not be detached since they uses retainers on the Cassette-up Compartment.

(4) Loosen the fixing screw (2), as shown in the detailed view.

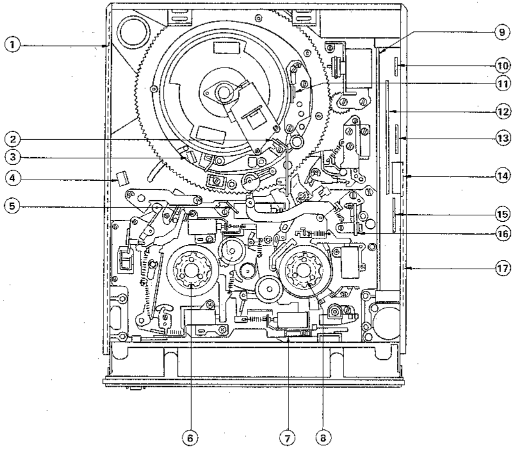
(5) Loosen the right fixing screws in the same manner. The Cassette-up Compartment can now be removed from the chassis.


Cassette-up Compartment
hole
PORTABLE VIDEOCASSETTE
2.6 mm TOTUS type screwdriver
(2.6 mm flatblade screwdriver)
screw (2)
screw (1)

2-3. MAIN PARTS LOCATION

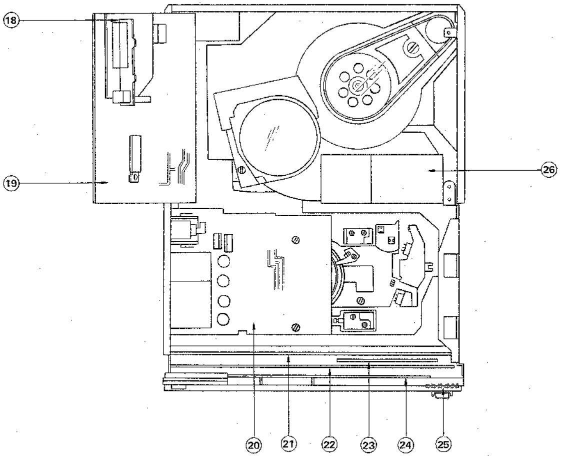
2-3-1. Location of the Printed Circuit Board

(TOP VIEW)



① SV-57 Board
② DUS-5 Board
③ DUS-5 Board
④ LE-20 Board
⑤ LE-21 Board
⑥ PC-22 Board
⑦ TM-19 Board
⑧ PC-22 Board
⑨ AU-49 Board
⑩ SW-61 Board (For VO-6800PS)
⑪ DU-58 Board
⑫ CM-19 Board
⑬ DU-79 Board
⑭ DUS-6 Board
⑮ DUS-3 Board
⑯ DUS-4 Board
⑰ AU-51 Board

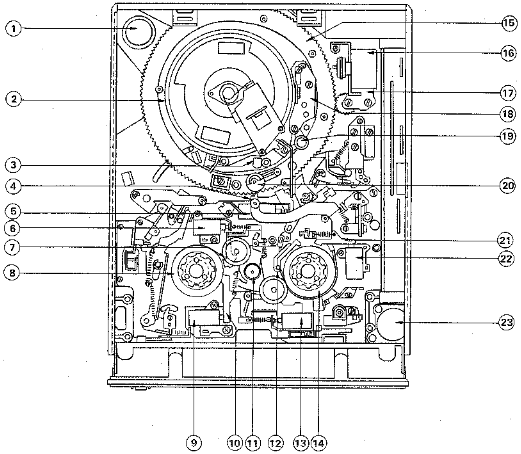
(BOTTOM VIEW)



⑱ YC-24 Board
⑲ VO-11 Board (with DUS-22 Board)
⑳ PS-42 Board
㉑ SY-22 Board
㉒ SY-18 Board (with DUS-33 Board)
㉓ SY-23 Board (with DUS-37 Board)
㉔ KY-53 Board
㉕ SW-29 Board
㉖ RP-16 Board

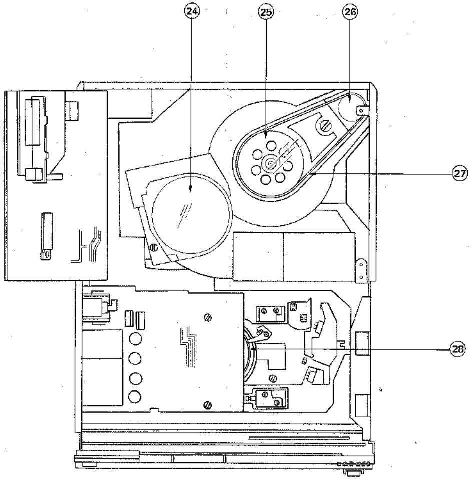
2-3-2. Location of the Mechanical Main Parts/Components

(TOP VIEW)



① Drum Motor
② Drum
③ Full Erase Head
④ Tension Regurator
⑤ Tension Regulator Solenoid
⑥ Take-up Idler Solenoid
⑦ Take-up Soft Brake
⑧ Take-up Reel Table
⑨ Take-up Brake Solenoid
⑩ Take-up Main Brake
⑪ Midway Pulley
⑫ Supply Soft Brake
⑬ Supply Idler Solenoid
⑭ Supply Reel Table
⑮ Threading Ring
⑯ Threading Motor
⑰ Threading Gear Box
⑱ Audio/CTL Head
⑲ Capstan
⑳ Pinch Roller
㉑ Supply Main Brake
㉒ Supply Brake Solenoid
㉓ Reel Motor

(BOTTOM VIEW)



㉔ Capstan Motor
㉕ Drum Pulley
㉖ D Motor Pulley
㉗ Drum Belt
㉘ Relay Pulley

2-4. PRINTED CIRCUIT BOARD

The circuit information is provided below.

System	Board	Circuit function
VIDEO	VO-11	Y/C Modulator/Demodulator
	DUS-22	
	RP-16	REC/PB Head Amplifier
	YC-24	Y/C Sep. and PBRF Amplifier
AUDIO	AU-49	REC/PB Amplifier
	AU-51	Erase/Bias Oscillator
	DUS-3	
	CM-19	MIC. Input
	DU-58	Audio R/P Head
SERVO	SV-57	Drum/Capstan/Reel Servo
	PC-22	Take-up/Supply Reel FG
	DUS-6	Tracking Control Volume
POWER	PS-42	Power Supply and Power Save
SYSTEM CON-TROL	SY-18	System Control
	DUS-33	
	SY-22	
	KY-53	Function Key and LCD Display
	SY-23	Solenoid Driver
OTHER	LE-20	Tape Beginning/End Detector
	LE-21	
	DUS-5	
	SW-29	Meter Select
	DUS-4	Tension Regulator Switch
	DU-79	Camera I/O

2-5. CONNECTION CONNECTOR

When external cables are connected to the various connectors on the connector panel during the maintenance, hardware (as stated below) or equivalents must be used.

Panel Indication	Connection Connector
VIDEO IN VIDEO OUT	1-560-069-11 PLUG, BNC, male
AUDIO IN	1-508-084-00 CONNECOTOR, XLR, 3P, male
AUDIO OUT	1-508-083-00 CONNECTOR, XLR, 3P, female
CAMERA	1-508-929-00 PLUG, 14P, male
DC IN 12V	1-508-362-00 CONNECTOR, XLR, 4P, female

2-6. INPUT/OUTPUT SIGNAL OF THE CONNECTOR

INPUT

VIDEO IN : 1 Vp-p +1.0, -0.5 V
composite, sync negative
75 ohms, unbalanced

AUDIO IN

CAMERA MIC IN :
-20 dB/-60 dB switchable,
more than 3K ohms impedance,
balanced

CH-1/DUB, CH-2/R :

LINE : +4 dB, more than 10K ohms
impedance, balanced

MIC : -60 dB, more than
3K ohms impedance,
balanced

OUTPUT

VIDEO OUT : 1 Vp-p ±0.2 V, composite,
sync negative, 75 ohms,
unbalanced

AUDIO OUT

MONI (CH-1/L), CH-2/R :
+4 dB (600 ohm load) balanced

EARPHONE : -20 to -33 dB (8 ohm load),
adjustable

2-7. SPARE PARTS

(1) Safety Related Components Warning.
Components identified by shading and marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.
Replace these components with the Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

(2) Replacement Parts supplied from the Sony Parts Center will sometimes have a different shape from the original parts. This is due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".
This manual's exploded views and electrical spare parts list indicate the part numbers of "the standardized genuine parts at the present". Regarding engineering part changes in out engineering department, refer to Sony service bulletins and service manual supplements.

(3) The parts marked with "s" in the SP column of the exploded views and electrical spare parts list are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

2-8. NOTES WHEN SERVICING

2-8-1. When lifting the VTR with the cabinet Removed,

Since this VTR is designed as a portable VTR, and the frame is composed of aluminum for lightweight.
When the set is lifted with the cabinet removed, do not press forcibly against the frame. If you do so, there is a danger that the frame will be bent.

2-8-2. Maintenance of the Printed Circuit Board in the Rotary Upper Drum

The Playback Pre-amplifier for the video signal, the PA-35 Board, is installed on the Rotary Upper Drum.
The dynamic balance of the entire Rotary Upper Drum is perfectly adjusted in this state.
Therefore, the PA-35 Board should not be removed from the Rotary Upper Drum nor should the electric parts on the printed board be installed or removed. (Never perform solder to remove or install.)
When the PA-35 Board fails, replace the entire Rotary Upper Drum. If the PA-35 Board is removed, the dynamic balance will be out of specification. Jitter be increase, and the servo will be unstable.

2-9. MOUNTING OF THE TAPE BEGINNING SENSOR AND TAPE THE END SENSOR

Short between TP-6/SY-22 Board and GND (frame) with a short clip lead. The Tape Beginning Sensor and the Tape End Sensor stop their operation.

2-10. HOW TO OPERATE THE VTR WITHOUT INSERTING A CASSETTE TAPE

Perform Sec. 2-9, Muting of the Tape Beginning Sensor and the Tape End Sensor, before operating the following modes.

2-10-1. Threading

(1) Turn the POWER OFF.
(2) Push down on the Cassette-in Switch with finger. (The Threading operation starts.)
(3) Remove the finger from the Cassette-in Switch after the rotation of the Threading Ring has fully stopped. (The VTR is put into the Thread-end mode.)

2-10-2. Unthreading (EJECT)

(1) Depress the EJECT botton until it locks.
(2) Push down on the Cassette-in Switch with a finger. (The Unthreading operation starts.)
(3) When the Threading Ring has stopped its rotation, the Cassette-up Compartment rises automatically.

2-10-3. PLAY

(1) Put the machine into the Threading-end state.
(2) Push the PLAY button.

2-10-4. F.FWD

(1) Put the machine into the Threading-end state.
(2) Press the F.FWD button.

2-10-5. REW

(1) Put the machine into the Threading-end state.
(2) Press the REW button.

2-10-6. REC

(1) Connect the video signal or a camera to the machine.
(2) Put the machine into the Threading-end state.
(3) Push the REC and PLAY buttons simultaneously.

2-10-7. STOP

(1) Push the STOP button. (The cassette tape stops and remains in the Threading state.)

2-11. TAPE PROTECTION

The VTR has various detection circuits for tape protection. These detection circuits are described here for each modes.

(1) During threading
When the drum rotation stops for more than 2 seconds during the Threading mode, the DRUM ROTATE signal is not present. The protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the threading operation stops.

(2) During F.FWD
When the VTR is put into the following states during the F.FWD mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the F.FWD operation stops.
- When the take-up reel table rotation stops for more than 2.4 seconds and generates the REEL STOP signal.
- When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

(3) During REW
When the VTR is put into the following states during the REW mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the REW operation stops.
- When the supply reel table rotation stops for more than 2.4 seconds and generates the REEL STOP signal.
- When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATION signal.

(4) During PLAY

When the VTR is put into the following states during the PLAY mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the PLAY operation stops.

. When the take-up reel rotation stops for more that 1.2 seconds and generates the REEL STOP signal.

. When the drum rotation stops for more than 2 seconds and does not generate tha DRUM ROTATION signal.

When put into the following states, the protection circuit detects tape slack if it occurs and releases the pressure of the pinch roller against the capstan shaft.

. When the capstan motor rotates in the reverse direction (against the designated direction) for more than 2 seconds with the pinch roller pressed against the capstan shaft.
(For example, the capstan motor should rotate in the FWD direction in the PLAY mode. However, when it rotates in the REV direction, the tape protection circuit detects this.)

(5) During STOP in the STANDBY ON mode

When the VTR is put into the following state during STOP in the STANDBY ON mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights.

. When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

(6) During STOP in the STANDBY OFF mode

When the VTR is put into the following states during STOP in the STANDBY OFF mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights.

. When the capstan shaft rotates in the REV direction to release the tape tension with the pinch roller pressed against the capstan shaft, if the capstan shaft does not stop its rotation in 2 seconds, the pinch roller pressure against the capstan shaft is released.

. When the tension arm does not return to the designated position in 700 msec. during the tape tension releasing operation.

(7) During FWD/PAUSE

When the VTR is put into the following state during the FWD/PAUSE mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the FWD/PAUSE operation stops.

. When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

(8) During REC/PAUSE

When the VTR is put into the following states during the REC/PAUSE mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the REC/PAUSE operation stops.

. When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

. When the capstan shaft rotates in the REV direction to release the tape tension with the pinch roller pressed against the capstan shaft, if the capstan shaft does not stop its rotation in 2 seconds, the pinch roller pressure against the capstan shaft is released.

(9) During SHORT REW

When the VTR is put into the following states during the SHORT REW mode, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the SHORT REW operation stops.

. When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

. When the supply reel table rotation stops for more than 2.4 seconds and generates the REEL STOP signal.

(10) Druing BRAKE MODE

When the operation of (such as PLAY, F.FWD and FEW) modes changes to the STOP mode, the reel table stops its rotation during this mode changing. This mode is called the BRAKE MODE.

When the VTR is put into the following states during the BRAKE MODE, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights.

. When the Take-up Reel Table stops for more than 2 seconds and generates the REEL STOP signal during the mode change from the PLAY or F.FWD mode to the STOP mode.

. When the Supply Reel Table stops for more than 2 seconds and generates the REEL STOP signal during the mode change from the REW mode to the STOP mode.

. When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

(11) During unthreading (take-up of the tape by the Take-up Reel Table)

. This Unthreading mode shows the following unthreading operations,

When the condensation sensor on the lower drum detects condensation or when the drum does not rotate.

When the VTR is put into the following state during this operation, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the unthreading operation stops.

. When the Take-up Reel Table rotation stops for more than 2 seconds and generates the REEL STOP signal.

(12) During unthreading (take-up of the tape by the Supply Reel Table)

This Unthreading mode shows the normal unthreading operation. When the VTR is put into the following states during this operation, the protection circuit detects tape slack if it occurs. The SLACK LAMP lights, and the unthreading operation stops.

. When the Supply Reel Table rotation stops for more than 2 seconds and generates the REEL STOP signal.

. When the drum rotation stops for more than 2 seconds and does not generate the DRUM ROTATE signal.

2-12. CASSETTE REMOVAL PROCEDURE WHEN NORMAL EJECTION IS NOT POSSIBLE

If the eject operation becomes impossible due to tape slack when the eject operation is attempted, cassette tape can be removed from the machine by the following procedures.

(1) Remove the rear panel.

(2) Remove the upper case.

(3) Remove the upper lid of Cassete-up Compartment.

(4) Push down on the EJECT key until it locks.

(5) Turn the pulley of Threading Motor by hand so that the Threading Ring rotates into the Unthreading mode. When the Unthreading mode is completed, the lock of the Cassette-up Compartment is released and rises automatically. At this time, hold down the Cassette-up Compartment by hand so that it does not rise when the Unthreading mode is completed and the tape is not damaged.

(6) While holding the cassette tape lid so that it does not close, rise the Cassette-up Compartment slowly.

(7) Remove the tape remaining in the machine carefully so that the tape is not damaged.

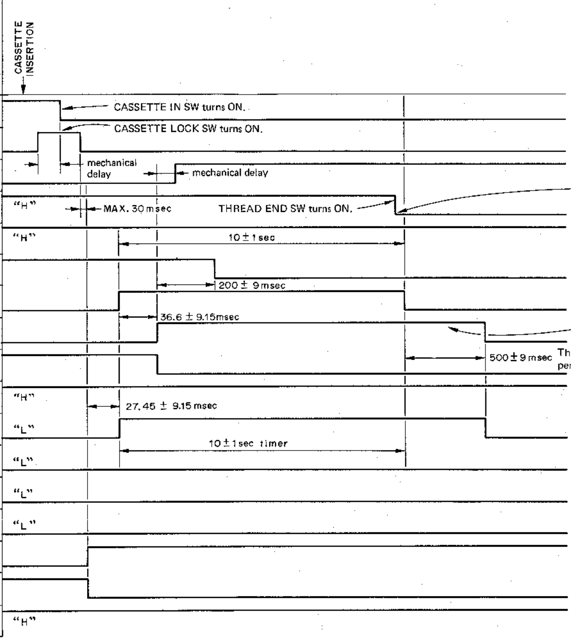
2-13. FIXTURE FOR ALIGNMENT

Parts No.	Description
J-6001-820-A	Drum Eccentricity Gauge (3)
J-6001-830-A	Drum Eccentricity Gauge (2)
J-6001-840-A	Drum Eccentricity Gauge (1)
J-6001-930-A	Drum Eccentricity Gauge (4)
J-6002-270-A	Reel Table Torque measurement tape (40 mm dia.)
J-6009-830-A	Flatness Plate
J-6080-013-A	Dihedral Adjusting screw
J-6080-029-A	Small Mirror for Adjustment
J-6080-030-A	Spare Mirror
J-6130-010-A	Reel Table Height Check Base Jig
J-6130-020-A	Reel Table Height Check Jig
J-6152-450-A	Clearance Check Gauge
J-6152-560-A	Tape Guide Slantness Check Tool
Y-2031-001-0	Cleaning Fluid
2-034-697-00	Cleaning Piece
3-702-390-01	Eccentric screwdriver (4mm dia.)
7-732-050-20	Tension Scale (50 g full scale)
7-732-050-30	Tension Scale (100 g full scale)
7-732-050-50	Tension scale (500 g full scale)
8-960-015-04	Alignment Tape, RR5-3SA
9-911-053-00	Thickness Gauge

2-14. TIMING CHART

CASSETTE IN-(THREADING)-STOP

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
CASSETTE IN	L; CASSETTE IN	SY-18 IC3-4	20
CASSETTE LOCK	L; CASSETTE LOCK	SY-18 IC4-4	20
UNTHREAD END	L; UNTHREAD END	SY-18 IC6-4	20
THREAD END	L; THREAD END	SY-18 IC5-4	20
EJECT SW	L; EJECT SW ON	SY-18 IC3-3	1J
DRUM ON	L; DRUM ON	SY-22 IC9-16	05
S-BRAKE ON	H; S-BRAKE ON (*1)	SY-22 IC9-23	04
THREAD MOTOR ON	H; THREAD MOTOR ON	SY-22 IC9-2	03
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02
FWD / $\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY-18 IC2-2	06
TENREG. SOLENOID ON	H; TENREG. SOL. ON	SY-22 IC9-1	04
T-BRAKE ON	H; T-BRAKE ON (*1)	SY-22 IC9-5	03
PINCH SOLENOID ON	H; PINCH SOL. ON	SY-22 IC9-4	03
UNTHREAD MOTOR ON	H; UNTHREAD MOTOR ON	SY-22 IC9-3	03
SEARCH	L; SEARCH	SY-18 IC2-1	06
CAPSTAN SPEED 0		SY-18 IC2-7	08
CAPSTAN SPEED 1		SY-18 IC2-8	08



If the THREAD END switch is not turned into "L" level during 10±1 sec, the system control circuit detects as the threading trouble, and then the threading operation is stopped immediately.

Threading motor turns into threading direction.

Threading ring is over turning in this period.

NOTE

*1: "S-BRAKE ON" or T-BRAKE ON" means the following state.

"S-BRAKE ON" or "T-BRAKE ON" signal turns "H"

↓

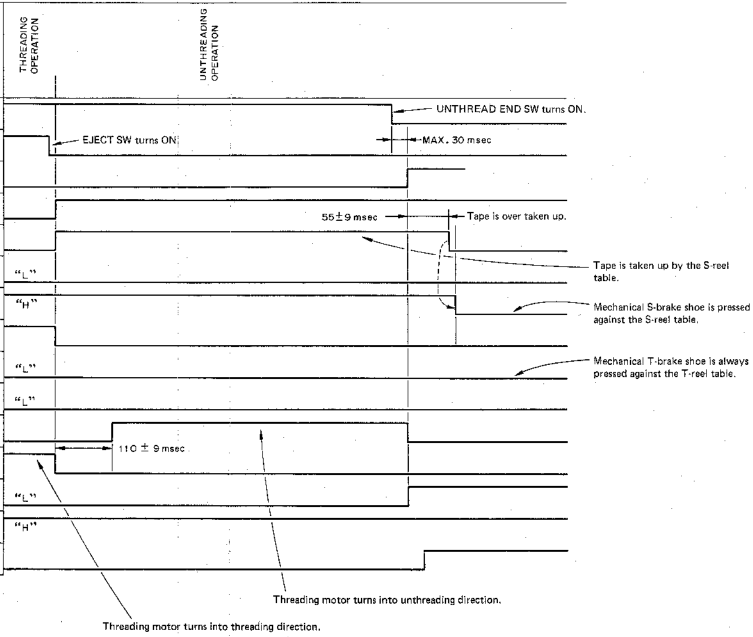
S-brake solenoid or T-brake solenoid is energized.

↓

Mechanical S-brake shoe or T-brake shoe is released from the each reel table.

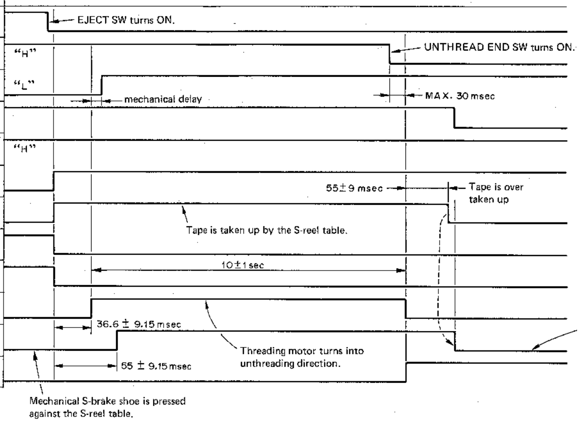
EJECT OPERATION DURING THREADING

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
UNTHREAD END	L; UNTHREAD END	SY−18 IC6−4	20
EJECT SW	L; EJECT SW ON	SY−18 IC3−3	1U
CASSETTE IN SW	L; CASSETTE IN	SY−18 IC3−4	20
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY−22 IC5−17	02
S−IDLER SOLENOID ON	H; S−IDLER SOL. ON	SY−22 IC9−21	04
T−IDLER SOLENOID ON	H; T−IDLER SOL. ON	SY−22 IC9−22	04
S−BRAKE ON	H; S−BRAKE ON	SY−22 IC9−23	04
TENREG. SOLENOID ON	H; TENREG. SOL ON	SY−22 IC9−1	04
T−BRAKE ON	H; T−BRAKE ON	SY−22 IC9−5	03
PINCH SOLENOID ON	H; PINCH SOL. ON	SY−22 IC9−4	03
UNTHREAD MOTOR ON	H; UNTHREAD MOTOR ON	SY−22 IC9−3	03
THREADING MOTOR ON	H; THREAD MOTOR ON	SY−22 IC9−2	03
DRUM ON	L; DRUM ON	SY−22 IC9−16	05
FWD / $\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY−18 IC2−2	06
POWER SAVE	H; POWER SAVE	SY−19 IC8−20	16


THREADING OPERATION
UNTHREADING OPERATION
UNTHREAD END SW turns ON.
EJECT SW turns ON
MAX. 30 msec
55±9 msec
Tape is over taken up.
Tape is taken up by the S-reel table.
"L"
"H"
Mechanical S-brake shoe is pressed against the S-reel table.
"L"
Mechanical T-brake shoe is always pressed against the T-reel table.
"L"
110 ± 9 msec
"L"
"H"
Threading motor turns into unthreading direction.
Threading motor turns into threading direction.

UNTHREADING OPERATION FROM STOP MODE (1)

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
EJECT SW	L; EJECT SW ON	SY-18 IC3-3	1U
UNTHREAD END	L; UNTHREAD END	SY-18 IC6-4	20
THREAD END	L; THREAD END	SY-18 IC5-4	20
DRUM ROTATE	H; DRUM ROTATE	SY-18 IC2-12	0H
HUMID	L; HUMID	SY-18 IC5-6	22
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02
S - IDLER SOLENOID ON	H; S-IDLER SOL. ON	SY-22 IC9-21	04
FWD / $\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY-18 IC2-2	06
TENREG. SOLENOID ON	H; TENREG. SOL. ON	SY-22 IC9-1	04
UNTHREAD MOTOR ON	H; UNTHREAD MOTOR ON	SY-22 IC9-3	03
S - BRAKE ON	H; S-BRAKE ON	SY-22 IC9-23	04
DRUM ON	H; DRUM OFF L; DRUM ON	SY-22 IC9-16	05

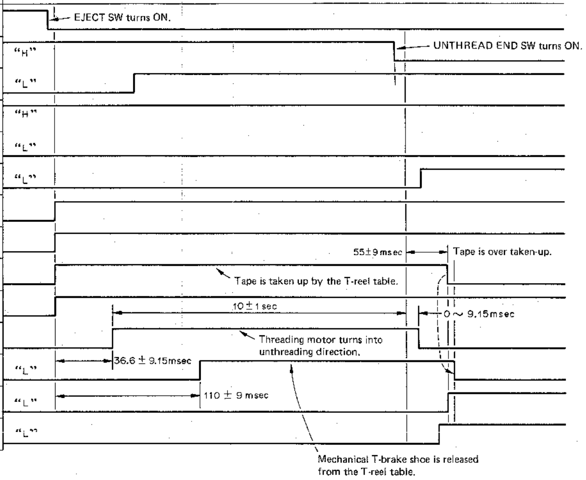

EJECT SW turns ON.
UNTHREAD END SW turns ON.
"H"
"L"
mechanical delay
MAX. 30 msec
"H"
55±9 msec
Tape is over taken up
Tape is taken up by the S-reel table.
10±1 sec
36.6 ± 9.15 msec
Threading motor turns into unthreading direction.
55 ± 9.15 msec
Mechanical S-brake shoe is pressed against the S-reel table.
Mechanical S-brake shoe is pressed against the S-reel table.

If the UNTHREAD END switch is not turned into "L" level during 10±1 sec, the system control circuit detects as the unthreading trouble, and the following signals change immediately.

- UNTHREAD MOTOR ON: H→L
- DRUM ON: L→H
- S-IDLER SOLENOID ON: H→L
- S-BRAKE ON: H→L
- FDW/REV COMMAND: L→H

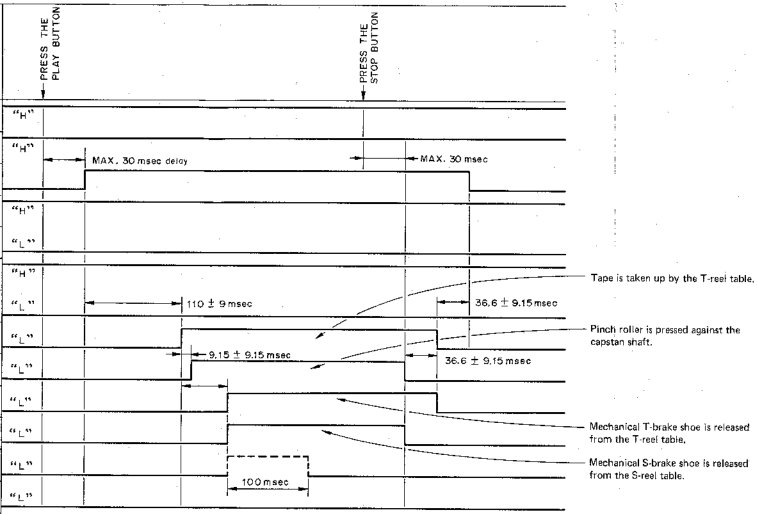
UNTHREADING OPERATION FROM STOP MODE (2)
(When DRUM ROTATE signal or HUMID signal is detected, following operation is performed.)

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
EJECT SW	L; EJECT SW ON	SY-18 IC3-3	1U
UNTHREAD END	L; UNTHREAD END	SY-18 IC6-4	20
THREAD END	L; THREAD END	SY-18 IC5-4	20
DRUM ROTATE	H; DRUM ROTATE	SY-18 IC2-12	0H
HUMID	L; HUMID	SY-18 IC5-6	22
CASSETTE IN SW	L; CASSETTE IN	SY-18 IC3-4	20
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02
DRUM ON	L; DRUM ON	SY-22 IC9-16	05
T - IDLER SOLENOID ON	H; T-IDLER SOL. ON	SY-22 IC9-22	04
FWD / $\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY-18 IC2-2	06
UNTHREAD MOTOR ON	H; UNTHREAD MOTOR ON	SY-22 IC9-3	03
T - BRAKE ON	H; T-BRAKE ON	SY-22 IC9-5	03
REEL ON	L; REEL ON	SY-22 IC6-10	
POWER SAVE	H; POWER SAVE	SY-18 IC8-20	16


EJECT SW turns ON.
"H"
UNTHREAD END SW turns ON.
"L"
"H"
"L"
"L"
55±9 msec
Tape is over taken-up.
Tape is taken up by the T-reel table.
10 ± 1 sec
0 ~ 9.15msec
Threading motor turns into unthreading direction.
"L"
36.6 ± 9.15msec
"L"
110 ± 9 msec
"L"
Mechanical T-brake shoe is released from the T-reel table.

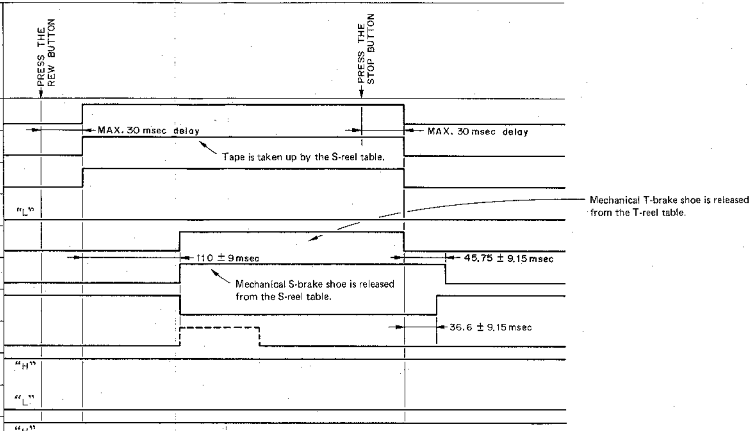
STOP - PLAY - STOP

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
SERVO LOCK	H; SERVO LOCK	SY-18 IC2-20	0P
SEARCH	L; SEARCH	SY-18 IC2-1	06
TENREG. SOLENOID ON	H; TENREG. SOL. ON	SY-22 IC9-1	04
FWD / $\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY-18 IC2-2	06
DRUM AFC ON	H; DRUM AFC ON	SY-22 IC9-15	05
CAPSTAN SPEED 1		SY-18 IC2-8	08
CAPSTAN SPEED 0		SY-18 IC2-7	08
T - IDLER SOLENOID ON	H; T-IDLER SOL. ON	SY-22 IC9-22	04
PINCH SOLENOID ON	H; PINCH SOL. ON	SY-22 IC9-4	03
T - BRAKE ON	H; T-BRAKE ON	SY-22 IC9-5	03
S - BRAKE ON	H; S-BRAKE ON	SY-22 IC9-23	04
DRUM ON	L; DRUM ON	SY-22 IC9-16	05
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02


PRESS THE PLAY BUTTON
PRESS THE STOP BUTTON
"H"
"H"
"H"
"L"
"H"
"L"
"L"
"L"
"L"
"L"
"L"
"L"
MAX. 30 msec delay
MAX. 30 msec
110 ± 9 msec
36.6 ± 9.15 msec
9.15 ± 9.15 msec
36.6 ± 9.15 msec
100 msec
Tape is taken up by the T-reel table.
Pinch roller is pressed against the capstan shaft.
Mechanical T-brake shoe is released from the T-reel table.
Mechanical S-brake shoe is released from the S-reel table.

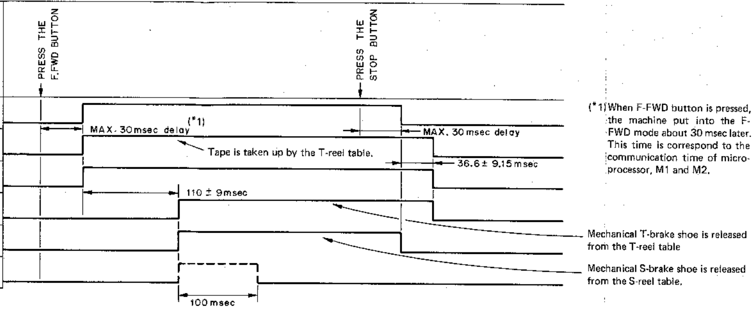
STOP – REW – STOP

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY – 22 IC5 – 17	02
S – IDLER SOLENOID ON	H; S-IDLER SOL. ON	SY – 22 IC9 – 21	04
DRUM AFC ON	H; DRUM AFC ON	SY – 22 IC9 – 15	05
PINCH SOLENOID ON	H; PINCH SOL. ON	SY – 22 IC9 – 4	03
T – BRAKE ON	H; T-BRAKE ON	SY – 22 IC9 – 5	03
S – BRAKE ON	H; S-BRAKE ON	SY – 22 IC9 – 23	04
FWD/$\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY – 18 IC2 – 2	06
DRUM ON	L; DRUM ON	SY – 22 IC9 – 16	05
CAPSTAN SPEED 1		SY – 18 IC2 – 8	08
CAPSTAN SPEED 0		SY – 18 IC2 – 7	08
SEARCH	L; SEARCH	SY – 18 IC2 – 1	06


PRESS THE REW BUTTON
PRESS THE STOP BUTTON
MAX. 30 msec delay
MAX. 30 msec delay
Tape is taken up by the S-reel table.
"L"
Mechanical T-brake shoe is released from the T-reel table.
110 ± 9 msec
45.75 ± 9.15 msec
Mechanical S-brake shoe is released from the S-reel table.
36.6 ± 9.15 msec
"H"
"L"
"H"

STOP-F·FWD-STOP

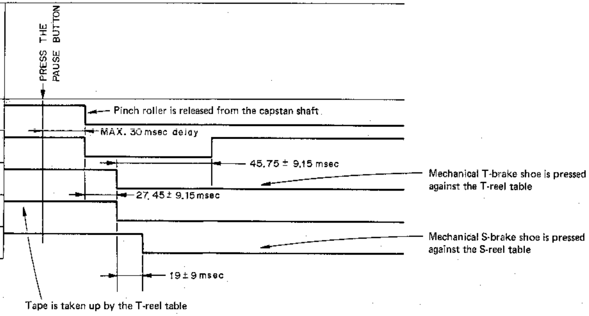
SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02
T-IDLER SOLENOID ON	H; T-IDLER SOL. ON	SY-22 IC9-22	04
DRUM AFC ON	H; DRUM AFC ON	SY-22 IC9-15	05
T-BRAKE ON	H; T-BRAKE ON	SY-22 IC9-5	03
S-BRAKE ON	H; S-BRAKE ON	SY-22 IC9-23	04
DRUM ON	L; DRUM ON	SY-22 IC9-16	05


PRESS THE F.FWD BUTTON
PRESS THE STOP BUTTON
MAX. 30msec delay
(*1)
MAX. 30msec delay
Tape is taken up by the T-reel table.
36.6± 9.15msec
110 ± 9msec
Mechanical T-brake shoe is released from the T-reel table
Mechanical S-brake shoe is released from the S-reel table.
100msec

(*1) When F-FWD button is pressed, the machine put into the F-FWD mode about 30 msec later. This time is correspond to the communication time of micro-processor, M1 and M2.

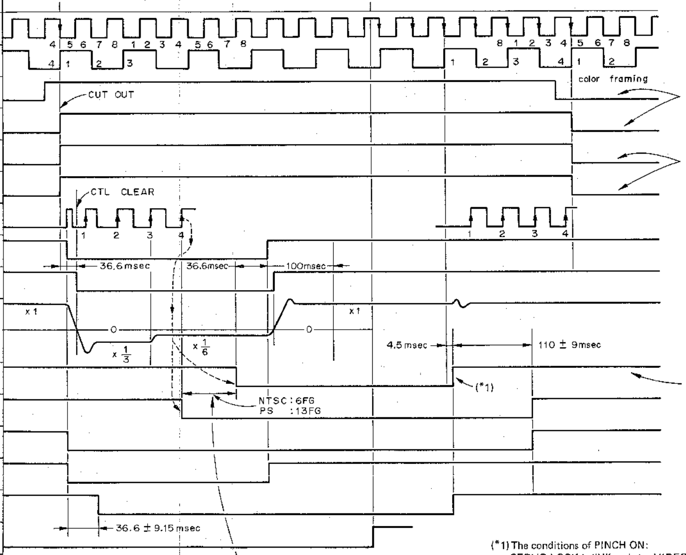
PLAY-PLAY·PAUSE

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
PINCH SOLENOID ON	H; PINCH SOL. ON	SY-22 IC9-4	03
TENREG. SOLENOID ON	H; TENREG. SOL. ON	SY-22 IC9-1	04
T-BRAKE ON	H; T-BRAKE ON	SY-22 IC9-5	03
T-IDLER SOLENOID ON	H; T-IDLER SOL. ON	SY-22 IC9-22	04
S-BRAKE ON	H; S-BRAKE ON	SY-22 IC9-23	04


PRESS THE PAUSE BUTTON
Pinch roller is released from the capstan shaft.
MAX. 30msec delay
45.75 ± 9.15msec
Mechanical T-brake shoe is pressed against the T-reel table
27.45± 9.15msec
Mechanical S-brake shoe is pressed against the S-reel table
19±9msec
Tape is taken up by the T-reel table

REC – REC / PAUSE – REC

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
1/2 VD		SY–18 IC2–34	0L
1/4 VD			02
VIDEO CH–B REC	L; VIDEO CH-B REC OUT	SY–22 IC5–19	02
VIDEO CH–A REC	L; VIDEO CH-A REC OUT	SY–22 IC5–20	01
AUDIO CH–1 REC	H; AUDIO CH-1 REC OUT	SY–22 IC5–1	01
AUDIO CH–2 REC	H; AUDIO CH-2 REC OUT	SY–22 IC5–23	0–
PB CTL		SY–22 IC2–39	06
FWD/$\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY–18 IC2–2	06
CAPSTAN REV STATUS			
CAPSTAN SPEED			
PINCH SOLENOID ON	H; PINCH SOL. ON	SY–22 IC9–4	03
T – BRAKE ON	H; T – BRAKE ON	SY–22 IC9–5	03
S – BRAKE ON	H; S – BRAKE ON	SY–22 IC9–23	04
SEARCH	L; SEARCH	SY–18 IC2–1	06
T – IDLER SOLENOID ON	H; T-IDLER SOL. ON	SY–22 IC9–22	04
CAMERA $\overline{\text{START}}$ / STOP	H; STOP L; START	SY–18 IC4–3	1U


4 5 6 7 8 1 2 3 4 5 6 7 8
8 1 2 3 4 5 6 7 8
4 1 2 3
1 2 3 4 1 2
color framing
CUT OUT
CTL CLEAR
1 2 3 4
1 2 3 4
36.6msec
36.6msec
100msec
x 1
0
x $\frac{1}{3}$
x $\frac{1}{6}$
0
x 1
4.5msec
110 ± 9msec
(*1)
NTSC : 6FG
PS : 13FG
36.6 ± 9.15 msec

Video signal is recorded on the tape.

Audio signal is recorded on the tape.

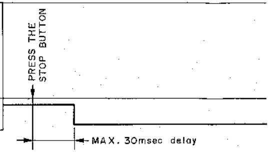
Pinch roller is pressed against the capstan

(*1) The conditions of PINCH ON:
SERVO LOCK is "H" and also VIDEO DET (CAMERA VIDEO DET or LINE VIDEO DET) is "H".

FG count is displayed on the LCD display on the front panel in the self check mode. (See ref. sec. 2 - 15)
FG count is adjusted by RV2/SY-22 board.

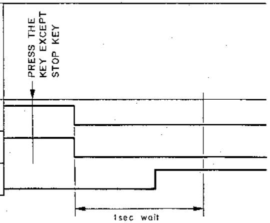
REC·FWD·PAUSE → STOP and
FWD·PAUSE → STOP

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
TENREG. SOLENOID ON	H; TENREG. SOL. ON	SY-22 IC9-1	04


PRESS THE STOP BUTTON
MAX. 30msec delay

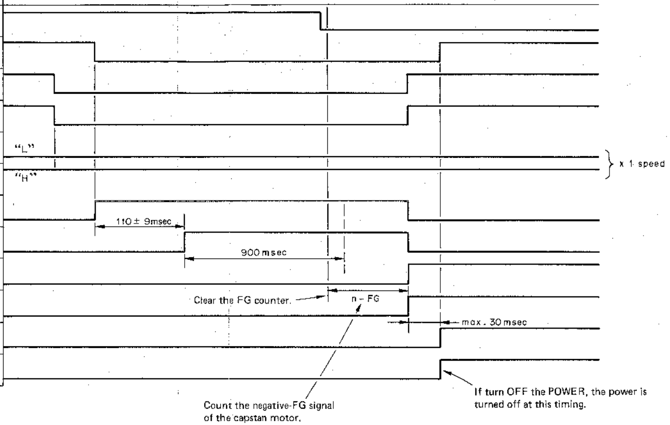
STANDBY OFF → STANDBY ON
(DRUM STOP → DRUM ROTATE)

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02
DRUM ON	L; DRUM ON	SY-22 IC9-16	05
DRUM ROTATE	H; DRUM ROTATE	SY-18 IC2-12	0H


PRESS THE KEY EXCEPT STOP KEY
1sec wait

STANDBY OFF (TENSION RELEASE MODE)

SIGNAL		MEASURING POINT	LABEL NO. ON SELF-DIAGNOSTICS
TENREG SOLENOID ON	H; TENREG SOL. ON	SY-22 IC9-4	04
CAPSTAN REV STATUS			0H
FWD/$\overline{\text{REV}}$ COMMAND	H; FWD L; REV	SY-18 IC2-2	06
SEARCH	L; SEARCH	SY-18 IC2-1	06
CAPSTAN SPEED 0		SY-18 IC2-7	08
CAPSTAN SPEED 1		SY-18 IC2-8	08
T-BRAKE ON	H; T-BRAKE ON	SY-22 IC9-5	03
PINCH SOLENOID ON	H; PINCH SOL. ON	SY-22 IC9-4	03
DRUM ON	L; DRUM ON	SY-22 IC9-16	05
CAPSTAN MOTOR ON	L; CAPSTAN MOTOR ON	SY-22 IC5-17	02
POWER SAVE	H; POWER SAVE	SY-18 IC8-20	16
POWER CONT	H; POWER CONT	SY-18 IC8-19	16



Clear the FG counter.

Count the negative-FG signal of the capstan motor.

If turn OFF the POWER, the power is turned off at this timing.

2-15. SELF-DIAGNOSTIC

. The VO-6800 equipped with a micro computer self diagnostics function which is used in the following manner.

(1) Check to see that the dc power circuit for REG 5V, UNSW 5V, and EVER 5V are normal.

(2) Turn the switch, S1 on the SY-22 board to ON to put the self check diagnostics mode.

(3) Check to see that the display function of the two right-hand digits of the LCD display are normal.

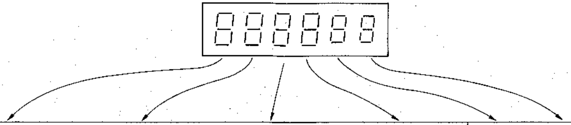
.Procedure: Check to see that the 00 to 26 are displayed when the RESET button is pressed repeatedly (00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0L, 0H, 0P, 0R, 0-, 0-(blank), 10, 11,———26)

(4) Find the signals to check in the self diagnostics mode from the timing chart.

(5) Find these signals in the following table, and enter the number or signal listed in the LABEL column as the two right-hand digits of the LCD display by using the RESET botton.

(6) Insert a cassette tape, and put the VTR into the state in which the trouble occured.

(7) Check the display in the four left-hand digits of the LCD display (0's and/or 1's are displayed). If the displayed conditions matches that listed in the following table, then operation is normal. If it dose not, check the appropriate signal.



	FIGURES OF DISPLAY				LABEL		
	1	2	3	4	5	6	
IC2/SY-18 OUTPUT DATA	$\overline{\text{VIDEO MUTE}}$ "0" $\binom{\text{SY-22}}{\text{IC5-5}}$	AUDIO MUTE "1" $\binom{\text{SY-22}}{\text{IC5-4}}$	AUDIO CH-2 $\overline{\text{PB}}$/EE "0/1" $\binom{\text{SY-22}}{\text{IC5-3}}$	AUDIO CH-1 $\overline{\text{PB}}$/EE "0/1" $\binom{\text{SY-22}}{\text{IC5-2}}$	0	0	
		VIDEO PB/$\overline{\text{EE}}$ "1/0" $\binom{\text{SY-22}}{\text{IC5-22}}$	$\overline{\text{AUDIO CH-2 REC}}$ "0" $\binom{\text{SY-22}}{\text{IC5-23}}$	$\overline{\text{AUDIO CH-1 REC}}$ "0" $\binom{\text{SY-22}}{\text{IC5-1}}$	0	1	
	$\overline{\text{CAPSTAN MOTOR ON}}$ "0" $\binom{\text{SY-22}}{\text{IC5-17}}$		$\overline{\text{VIDEO CH-B REC}}$ "0" $\binom{\text{SY-22}}{\text{IC5-19}}$	$\overline{\text{VIDEO CH-A REC}}$ "0" $\binom{\text{SY-22}}{\text{IC5-20}}$	0	2	
	T-BRAKE SOL.ON (*NOTE-1) "1" $\binom{\text{SY-22}}{\text{IC9-5}}$	PINCH SOL.ON "1" $\binom{\text{SY-22}}{\text{IC9-4}}$	UNTHREAD MOTOR ON "1" $\binom{\text{SY-22}}{\text{IC9-3}}$	THREAD MOTOR ON "1" $\binom{\text{SY-22}}{\text{IC9-2}}$	0	3	NOTE-1, "H"=T-BRAKE SOL.ON=T-BRAKE OFF
	S-IDLER SOL. ON "1" $\binom{\text{SY-22}}{\text{IC9-21}}$	T-IDLER SOL. ON "1" $\binom{\text{SY-22}}{\text{IC9-22}}$	S-BRAKE SOL. ON (*NOTE-2) "1" $\binom{\text{SY-22}}{\text{IC9-23}}$	TENREG. SOL.ON "1" $\binom{\text{SY-22}}{\text{IC9-1}}$	0	4	NOTE-2, "H"=S-BRAKE SOL.ON=S-BRAKE OFF
	$\overline{\text{DRUM ON}}$ "0" $\binom{\text{SY-22}}{\text{IC9-16}}$	DRUM AFC ON "1" $\binom{\text{SY-22}}{\text{IC9-15}}$			0	5	
	FWD/$\overline{\text{REV}}$ COMMAND "1" $\binom{\text{SY-18}}{\text{IC2-2}}$	$\overline{\text{SEARCH}}$ "0" $\binom{\text{SY-18}}{\text{IC2-1}}$		$\overline{\text{IC2 READY}}$ "0" $\binom{\text{SY-18}}{\text{IC2-47}}$	0	6	
		TEST INT OUT "1" $\binom{\text{SY-18}}{\text{IC2-5}}$	$\overline{\text{PB}}$ (*NOTE-3) "0" $\binom{\text{SY-18}}{\text{IC2-4}}$		0	7	NOTE-3, "L:PB" signal goes to low level in the FF, REW, FWD, REC FWD, and STD-BY on STOP modes.
			CAPSTAN SPEED 1 (*NOTE-13) $\binom{\text{SY-18}}{\text{IC2-8}}$	CAPSTAN SPEED 0 (*NOTE-13) $\binom{\text{SY-18}}{\text{IC2-7}}$	0	8	

	FIGURES OF DISPLAY				LABEL		
	1	2	3	4	5	6	
IC2/SY-18 INPUT DATA		"1" (SY-22 IC9-18)	$\overline{\text{SELF CHECK MODE}}$ "0" (SY-22 IC9-19)	$\overline{\text{AUTO STOP: OFF}}$ (✱NOTE-4) "0" (SY-22 IC9-20)	0	9	NOTE-4, When IC9 pin 20 turns "L", AUTO STOP (TAPE PROTECTION) mode does not function.
	$\overline{\text{TEN-REG. SW ON}}$ "0" (SY-18 IC2-35)	1/2 VD (SY-18 IC2-34)		BACK SPACE EDIT START (✱NOTE-5) "1" (SY-18 IC2-32)	0	L	NOTE-5, When the set is put into the REC FWD mode from REC PAUSE mode, this signal informs the mode change from IC1 to IC2 immediately.
	REEL STOP STATUS "1" (SY-18 IC2-15)	CAPSTAN FWD/$\overline{\text{REV}}$ "1/0" (SY-18 IC2-14)	CAPSTAN ROTATE "1" (SY-18 IC2-13)	DRUM ROTATE "1" (SY-18 IC2-12)	0	H	
	LINE/$\overline{\text{CAMERA}}$ "1/0" (SY-18 IC2-23)	$\overline{\text{CAMERA VIDEO DET.}}$ "0" (SY-18 IC2-22)	$\overline{\text{LINE VIDEO DET.}}$ "0" (SY-18 IC2-21)	SERVO LOCK "1" (SY-18 IC2-20)	0	P	
	CS1 (✱NOTE-6) (SY-22 IC5-16)	CSO (✱NOTE-6) (SY-22 IC5-15)	PINCH ON STATUS "1" (SY-22 IC5-14)	REEL STATUS "1": LARGE HUB" "0": SMALL HUB" (SY-22 IC5-13)	0	R	NOTE-6, PINCH OFF TIMING ADJ. when back space editing
	← CTL COUNT WHEN BACK SPACE EDITING →				0	—	
	← CTL COUNT WHEN BACK SPACE EDITING →				0	(BLANK)	
IC1/SY-18 OUTPUT DATA	FF LAMP "1" (SY-18 IC7-5)	PLAY LAMP "1" (SY-18 IC7-4)	T-LED ON "1" (SY-18 IC7-3)	S-LED ON "1" (SY-18 IC7-2)	1	0	NOTE-14, When the signals are all "1", LAMP (LED) lights.
	DUB LAMP "1" (SY-18 IC7-21)	REC LAMP "1" (SY-18 IC7-22)	FF/REW "1" (SY-18 IC7-23)	REW LAMP "1" (SY-18 IC7-1)	1	1	
	CHARACTER GEN. MUTE "1" (SY-18 IC7-17)	8P MONITOR DET. (✱NOTE-7) "1" (SY-18 IC7-18)	$\overline{\text{REC FWD}}$ "0" (SY-18 IC7-19)	PAUSE LAMP "1" (SY-18 IC7-20)	1	2	NOTE-7, When the connection cable (VMC-1MQ) is connected between pin 14 and pin 8, turns "1".
	$\overline{\text{OUTPUT STROBE}}$ "0" (SY-18 IC1-6)	"1" (SY-18 IC1-5)	DISPLAY ON/$\overline{\text{OFF}}$ "1/0" (SY-18 IC1-4)	TC WRITE EN "1" (SY-18 IC1-3)	1	3	
	TAPE END LAMP "1" (SY-18 IC8-5)	DOC ON "1" (SY-18 IC8-4)	SERVO LAMP "1" (SY-18 IC8-3)	SLACK LAMP "1" (SY-18 IC8-2)	1	4	
	REC FWD "1" (SY-18 IC8-21)	ALARM TONE "1" (SY-18 IC8-22)	BATTERY ALARM "1" (SY-18 IC8-23)	BATTERY END LAMP "1" (SY-18 IC8-1)	1	5	

	FIGURES OF DISPLAY				LABEL		
	1	2	3	4	5	6	
OUTPUT DATA	REC FWD PAUSE "1" $\binom{\text{SY-18}}{\text{IC8-17}}$		POWER CONT "1" $\binom{\text{SY-18}}{\text{IC8-19}}$	POWER SAVE "1" $\binom{\text{SY-18}}{\text{IC8-20}}$	1	6	
	BACK SPACE EDIT START (✻NOTE-5) "1" $\binom{\text{SY-18}}{\text{IC1-10}}$	$\overline{\text{CPU RESET ENABLE}}$ (✻NOTE-8) "0" $\binom{\text{SY-18}}{\text{IC1-9}}$	RAM DATA $\overline{\text{IN}}$/OUT "0/1" $\binom{\text{SY-18}}{\text{IC1-8}}$	CAMERA RESET "1" $\binom{\text{SY-18}}{\text{IC1-7}}$	1	7	NOTE-8, When the power supply is disconnected, this signal turns "0" if the CTL data is backuped.
SOFT STATUS					1	8	
					1	9	
	← ✻NOTE 9 →				1	L	
IC1/SY-18 INPUT DATA	$\overline{\text{IC2 READY}}$ "0" $\binom{\text{SY-18}}{\text{IC1-23}}$		$\overline{\text{INPUT STROBE}}$ (✻NOTE-10) "0" $\binom{\text{SY-18}}{\text{IC1-21}}$	TAPE FWD/$\overline{\text{REV}}$ "1/0" $\binom{\text{SY-18}}{\text{IC1-20}}$	1	H	NOTE-10, This signal is the STROBE PULSE for storing the data that is entered to IC1/SY-18.
	CTL RESET ENABLE (✻NOTE-8) "1" $\binom{\text{SY-18}}{\text{IC8-10}}$			$\overline{\text{CTL DROP DET.}}$ "0" $\binom{\text{SY-18}}{\text{IC8-13}}$	1	P	
	$\overline{\text{FF KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC6-1}}$	$\overline{\text{PLAY KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC5-1}}$	$\overline{\text{REW KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC4-1}}$	$\overline{\text{STOP KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC3-1}}$	1	R	
	$\overline{\text{DUB KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC6-2}}$	$\overline{\text{REC KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC5-2}}$	"1" $\binom{\text{SY-18}}{\text{IC4-2}}$	$\overline{\text{PAUSE KEY}}$ "0" $\binom{\text{SY-18}}{\text{IC3-2}}$	1	—	
	LOCAL/$\overline{\text{REMOTE}}$ "1/0" $\binom{\text{SY-18}}{\text{IC6-3}}$	$\overline{\text{COUNTER RESET}}$ "0" $\binom{\text{SY-18}}{\text{IC5-3}}$	CAMERA $\overline{\text{START}}$/STOP "0/1" $\binom{\text{SY-18}}{\text{IC4-3}}$	$\overline{\text{EJECT SW}}$ "0" $\binom{\text{SY-18}}{\text{IC3-3}}$	1	(BLANK)	
	$\overline{\text{UNTHREAD END}}$ "0" $\binom{\text{SY-18}}{\text{IC6-4}}$	$\overline{\text{THREAD END}}$ "0" $\binom{\text{SY-18}}{\text{IC5-4}}$	$\overline{\text{CASSETTE LOCK}}$ "0" $\binom{\text{SY-18}}{\text{IC4-4}}$	$\overline{\text{CASSETT IN}}$ "0" $\binom{\text{SY-18}}{\text{IC3-4}}$	2	0	
	$\overline{\text{TAPE END}}$ "0" $\binom{\text{SY-18}}{\text{IC6-5}}$	$\overline{\text{TAPE TOP}}$ "0" $\binom{\text{SY-18}}{\text{IC5-5}}$	$\overline{\text{8P MONITOR}}$ "0" $\binom{\text{SY-18}}{\text{IC4-5}}$	$\overline{\text{MISS REC SW}}$ "0" $\binom{\text{SY-18}}{\text{IC3-5}}$	2	1	
	LOCAL INHIBIT (✻NOTE-11) "1" $\binom{\text{SY-18}}{\text{IC6-6}}$	$\overline{\text{HUMID}}$ "0" $\binom{\text{SY-18}}{\text{IC5-6}}$	BATTERY END "H" $\binom{\text{SY-18}}{\text{IC4-6}}$	BATTERY BEFORE END "H" $\binom{\text{SY-18}}{\text{IC3-6}}$	2	2	NOTE-11, L: RM-680 + VO-6800 KEY FUNCTION H: RM-680 + STOPKEY and EJECT SW

	FIGURES OF DISPLAY				LABEL		
	1	2	3	4	5	6	
INPUT	REMOCON D3 "1" (SY-18 IC6-7)	REMOCON D2 "1" (SY-18 IC5-7)	REMOCON D1 "1" (SY-18 IC4-7)	REMOCON D0 "1" (SY-18 IC3-7)	2	3	
	NTSC / $\overline{\text{PAL}}$ "1/0" (SY-18 IC6-9)	$\overline{\text{REMOCON STANDBY}}$ "0" (SY-18 IC5-9)	REMOCON D5 "1" (SY-18 IC4-9)	REMOCON D4 "1" (SY-18 IC3-9)	2	4	
			REEL DET "1" (*NOTE-12)	DRUM ROT DET "1" (*NOTE-12)	2	5	NOTE-12, This signal is the slack signal that is detected in IC1/SY-18.
				TAPE BEFORE END "1" (SY-18 IC7-13)	2	6	

NOTE-9;

DISPLAYED DATA	CAUSE OF SLACK
0000 1L	Normal
0001 1L	The UNTHREAD END signal is not excuted after 10sec passed in the UNLOAD mode, or the THREAD END signal is not excuted after 10sec passed in the LOAD mode.
0011 1L	The capstan does not rotate reversely.
1001 1L	The REEL STOP signal is not produced after 2sec passed. The TEN REG switch is not turned on in the tension release mode.
1010 1L 1011 1L	Reel rotation is not good.

NOTE-13;

SPEED	SPEED 0	SPEED 1
x1	(1)	(0)
x1/3	(0)	(1)
x1/6	(0)	(0)

SECTION 3
PERIODIC CHECK AND MAINTENANCE

It is recommended that the following periodic check and maintenance schedule be employed in order to obtain maximum performance and longer tape life from VO-6800.

3-1.MAINTENANCE AFTER REPAIRS

Perform the following maintenance after repair regardless the operating hours of the machine.

(1) Cleaning of the video heads and confidence heads
- . Press the cleaning piece moistured with the cleaning fluid and turn the drum slowly with hand, cleaning the heads.
  (Never turn the motor by the electric power for the cleaning.)
- . Never move the cleaning piece in the vertical direction of head tip in the cleaning. It tends to damage the video head tips.

(2) Cleaning of tape running system
- . Wipe the tape bearing surfaces (of the tape guide, drum, capstaan, and pinch roller) with cleaning piece saturated with the cleaning fluid.

(3) Cleaning of drive system
- . Wipe the drive system (such as belt, idler, and reel table surface) with cleaning piece saturated with the cleaning fluid.

3-2. PERIODIC CHECK

Perform the maintenance checks described separately in accordance with the operational hours of the machine.

3-3. HOURS METER

VO-6800 has an hours meter on the chassis for the periodic check and maintenance. It is recommended that the hours meter is used as a tool for determining the periodic check. When the hours meter indicates the maximum value, 1000 hours, the hours meter must be replaced with a new one.

3-4. OTHERS

(1) Sony oil
- . Be sure to use the Sony oil as the lubrication oil. (If oil other than the Sony oil is used, various troubles due to different viscosity tends to be caused.)

Sony oil: Part No. 7-661-018-01
- . Use the Sony oil in which dust or other foreign material have not mixed for lubricating the bearing. (If foreign material is in the oil, wear or burning of the bearing tends to be caused.)

○: Cleaning ◆: Replace ◎: Apply a oil ◇: Check

Item \ Operating hours(H)	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	Remarks
Tape path cleaning	○	○	○	○	○	○	○	○	○	○	Perform whenever repair work is attempted.
Video and confidence heads cleaning and/or replacing	○	◆	○	◆	○	◆	○	◆	○	◆	Life of the video heads are affected extensively by operating ambient condition.
Belt and idler cleaning and/or replacing	—	○	—	◆	—	○	—	◆	—	○	
Pinch roller cleaning and/or replacing	○	○	○	○	○	◆	○	○	○	○	
Reel table surface cleaning	—	○	—	○	—	○	—	○	—	○	
Apply a oil to the reel shaft and thrust bearing	—	◎	—	◎	—	◎	—	◎	—	◎	
Check the T soft brake torque and/or T soft brake replacing	—	—	—	◇	—	—	—	◇	—	—	
Check the S soft brake torque and/or S soft brake replacing	—	◇	—	◇	—	◇	—	◇	—	◇	
Check the T brake torque and/or T main brake replacing	—	◇	—	◇	—	◇	—	◇	—	◇	
Check the S brake torque and/or S main brake replacing	—	◇	—	◇	—	◇	—	◇	—	◇	
Tracking check	—	◇	—	◇	—	◇	—	◇	—	◇	

3-5. EXTENSION HARNESS FOR REPAIR

The required number of connectors for repair the each Mounted Circuit Board is shown as below tables.

	Audio Board for repair (AU-49, AU-51, CM-19)	Servo Board for repair (SV-57)	System Control Board for repair (SY-22)
CONNECTOR \ EXTENDED HARNESS	AU-49; CN401, 403, 404, 405 406, 461 AU-51; CN431, 432	SV-57; CN501～CN515	SV-57; CN514 AU-49; CN403, 404, 405, 406
(A) 2P			
(B) 3P	5	6	2
(C) 4P	1	2	1
(D) 5P		1	
(E) 6P	2		1
(F) 8P		3	
(G) 9P			
(H) 10P		2	1
(I) 12P		1	
(J) 14P			

SECTION 4
REPLACEMENT OF MAJOR PARTS

4-1. REPLACEMENT OF THE ROTARY UPPER DRUM

- The Rotary Video Heads and Confidence Heads cannot be replaced individually. The entire Rotary Upper Drum Assembly must be replaced when any one of these heads fail.
- The Playback Pre-amplifier Board for the video signal, the PA-35 Board, is mounted on the Rotary Upper Drum, and the dynamic balance of the entire Rotary Upper Drum is perfectly adjusted in this condition. Therefore, the PA-35 Board should not be removed from the Rotary Upper Drum. When the PA-35 Board fails, replace the entire Rotary Upper Drum Assembly.

Tool: Drum eccentricity gauge (1)
Drum eccentricity gauge (2)
Drum eccentricity gauge (3)
Drum eccentricity gauge (4)
Reel table height adjustment base jig

Replacement procedure:

(1) Remove the fixing screws of the stay.

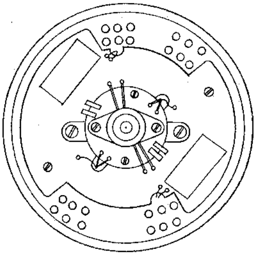
(2) Remove the brush of the Slip-ring Block.

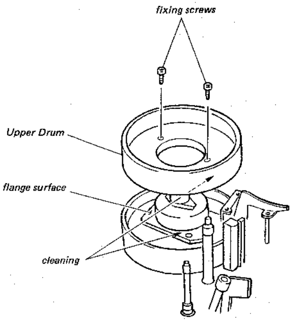
(3) Unsolder the twelve leads and terminals from the round printed circuit board at the center of the drum.

(4) Loosen the two fixing screws of the Rotary Upper Drum, and remove the Rotary Upper Drum from the Head Drum Assembly.

(5) Clean the matching surfaces of the flange and the new Rotary Upper Drum with a cloth moistened with a cleaning fluid. (If there is a spacer between drum and flange, it should be left in place, or a spacer of the same thickness should be re-installed.)

(6) Place the Rotary Upper Drum so that the silk screened "CH-A" on the PA Board is close to the "A" side of the round printed circuit board. Thread the two screws snugly but not tight.





Adjustment procedure:

(1) Place the reel table height adjustment base jig in the cassette's position.

(2) Assemble the drum eccentricity gauges (1), (2), (3) and (4), as shown in the figure. Mount the assembled gauges on the reel table height adjustment base jig. Adjust the position of the gauge so that the tip probe are at a point about 5mm from the top edge of the Rotary Upper Drum. (The drum eccentricity gauge can also be mounted on the rear frame, as shown in the figure.)

(3) Turn the Rotary Upper Drum slowly clockwise and check that the pointer deflection of the gauge is within 5 micron during one complete turn of the Rotary Upper Drum. If this specification is satisfied, proceed with Step (5). If it is not, perform Step (4).

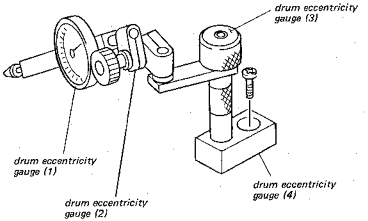
(4) Tap the inside of the Rotary Upper Drum with a nylon hammer or a screwdriver handle so that the gauge deflection remains within 5 micron.

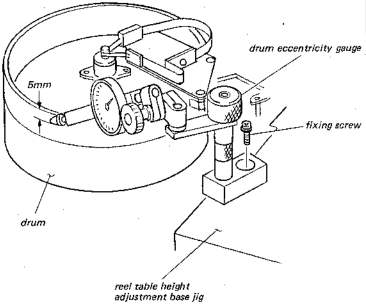
(5) After adjustment, tighten the two screws that secure the Rotary Upper Drum, alternately and gradually using a tightening torque of 8 Kg.cm.

(6) After the screws are tightened, check again that the eccentricity of the Rotary Upper Drum is within 5 micron.

(7) Solder the leads and terminals.

(8) Mount the brush and stay.


drum eccentricity gauge (3)
drum eccentricity gauge (1)
drum eccentricity gauge (2)
drum eccentricity gauge (4)


drum eccentricity gauge
5mm
fixing screw
drum
reel table height adjustment base jig

4-2. REPLACEMENT OF THE TENSION REGULATOR

Replacement procedure:

(1) Disconnect Connector CN-288 of the SY-22 Board.

(2) Remove the Supply Reel Table.

(3) Remove the spring from between the TR Drawer Arm B and the Spring Holder of the Tension Regulator Block.

(4) Remove the TR Band from the Tension Regulator.

(5) Remove the TR Drawer Arm (C).

(6) Remove the lock screw and the fixing screw, and remove the Tension Regulator Block.

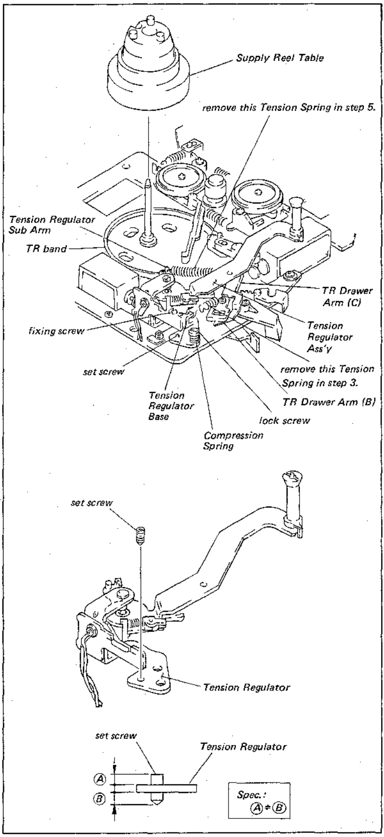
(7) Check that the position of the set screw of new Tension Regulator Block meets the required specification, as shown in the figure.

(8) Install the new Tension Regulator on the chassis with the fixing screw, compression spring and lock screw. At this time, note the following points:

  (i) Install the Tension Reglator so that it is parallel to the chassis.

  (ii) Turn the lock screw back 180 degrees from the position at which it is tight.

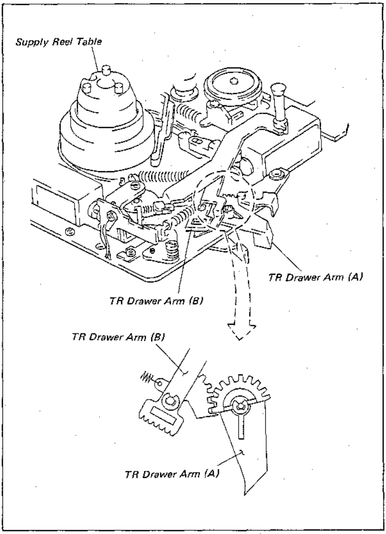
(9) Perform Steps (1) to (6) in reverse order.


Supply Reel Table
remove this Tension Spring in step 5.
Tension Regulator Sub Arm
TR band
TR Drawer Arm (C)
Tension Regulator Ass'y
fixing screw
set screw
remove this Tension Spring in step 3.
Tension Regulator Base
TR Drawer Arm (B)
lock screw
Compression Spring
set screw
Tension Regulator
set screw
Tension Regulator
Ⓐ
Ⓑ
Spec.:
Ⓐ≑Ⓑ

4-3. REPLACEMENT OF TR DRAWER ARM (A) OR (B)

Replacement procedure:

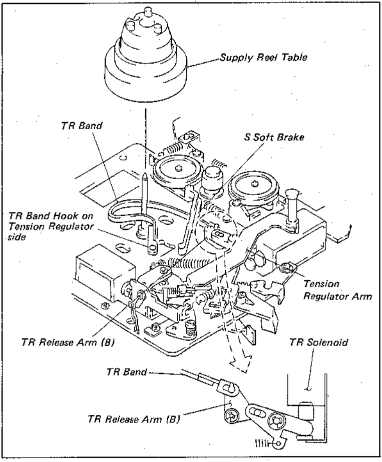
- When replacing the TR Drawer Arm (A) or (B), assemble TR Drawer Arm (A) and (B) to meet the positional relationship, as shown in the figure.


Supply Reel Table
TR Drawer Arm (A)
TR Drawer Arm (B)
TR Drawer Arm (B)
TR Drawer Arm (A)

4-4. REPLACEMNET OF TR BRAKE BAND

Replacement procedure:

(1) Remove the Supply Reel Table.
(2) Remove the TR Band Hook from the Tension Regulator.
(3) Remove the TR Band Hook from the TR Release Arm (B).
(4) Fasten the TR Band Hook of the new TR Brake Band on the TR Release Arm (B) without damaging the TR Brake Band.
(5) Pass it under the S Soft Brake without damaging the TR Brake Band.
(6) Fasten the TR Band Hook on the Tension Regulator.
(7) Install the Supply Reel Table.

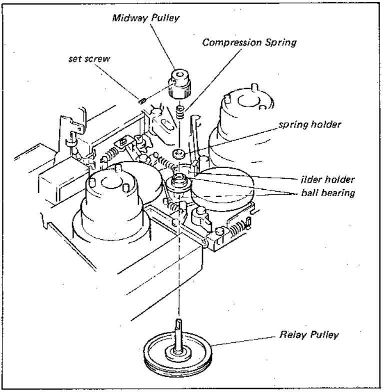

Supply Reel Table
TR Band
S Soft Brake
TR Band Hook on Tension Regulator side
Tension Regulator Arm
TR Release Arm (B)
TR Solenoid
TR Band
TR Release Arm (B)

4-5. REPLACEMENT OF RELAY PULLEY

Tool: Allen wrench (each edge has 1.27 mm)

Replacement procedure:

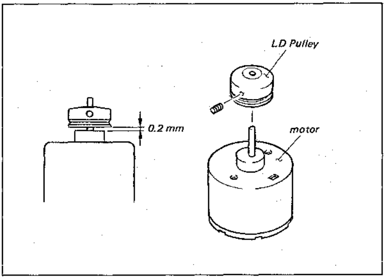
(1) Loosen the set screw of the Midway Pulley and remove the Relay Pulley.
(2) Check that the two ball bearings are installed in the Idler Holder.
(3) Insert the Relay Pulley.
(4) Insert the Spring Holder, Compression Spring and Midway Pulley, in order.
(5) insert the set screw of the Midway Pulley into the D cut portion of the pulley shaft.
(6) Aligne the ends of the Midway Pulley and the pulley shaft, and tighten the set screw.


Midway Pulley
Compression Spring
set screw
spring holder
idler holder
ball bearing
Relay Pulley

4-6. REPLACEMENT OF THREADING MOTOR

Replacement procedure:

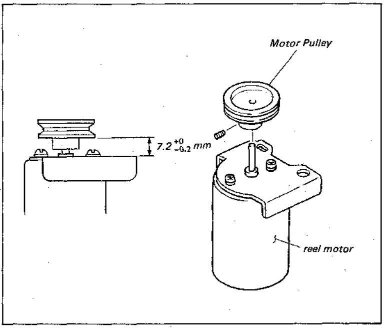
(1) Disconnect Connector CN207/SY-22 Board.
(2) Remove the gear box block from the unit.
(3) Remove the LD Pulley from the defective threading motor.
(4) Replace the new motor.
(5) Install the LD Pulley. Adjust the position of the LD Pulley so that the clearance between the LD Pulley and the motor meets the required specification.



4-7. REPLACEMENT OF REEL MOTOR

Replacement procedure:

(1) Disconnect Connector CN504/SV-57 Board.
(2) Remove the Reel Motor Block.
(3) Remove the Motor Pulley from the defective Reel Motor.
(4) Install this pulley in the new motor.
(5) Adjust the position of the Motor Pulley so that the clearance between the Motor Pulley and motor meets the required specification.



SECTION 5
LINK AND DRIVE SYSTEM ALIGNMENT

5-1. REEL TABLE HEIGHT ADJUSTMENT

. Because the Reel Table Height Adjustment functions as a reference in the entire tape run system, it is required that these adjustments be performed carefully.

Mode: Unthreading end

Tool: Reel table height check base jig
Reel table height check jig

Check procedure:

(1) Check that the "SO" and "TO" probes of the reel table height check jig slide over their respective Reel Table Flanges and that there is clearance between the flange and the probe.

(2) Check that the "SX" and "TX" probes are blocked by the flange.

.Use the "SO" and "SX" probes for the Supply Reel Table.

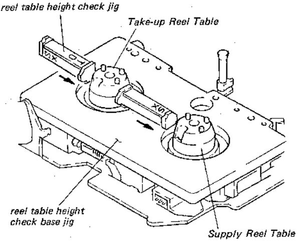
.Use the "TO" and "TX" probes for the Take-up Reel Table.

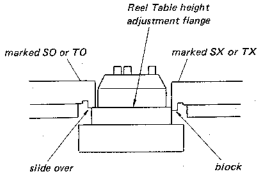
Adjustment procedure:

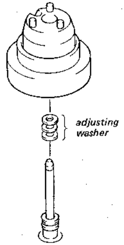
(1) Adjust with the washer under the Reel Table to meet the required specification.

Adjusting washer:

Poly Slider Washer, 3mm dia.
0.13 mm thick : 3-701-439-01
0.25 mm thick : 3-701-439-11
Guide Roller Washer, 3mm dia.
0.05 mm thick : 3-621-910-00
0.1 mm thick : 3-621-910-11


reel table height check jig
Take-up Reel Table
reel table height check base jig
Supply Reel Table


Reel Table height adjustment flange
marked SO or TO
marked SX or TX
slide over
block


adjusting washer

5-2. BRAKE SYSTEM ADJUSTMENT

5-2-1. T Soft Brake Clearance Adjustment

Mode: Unthreading end

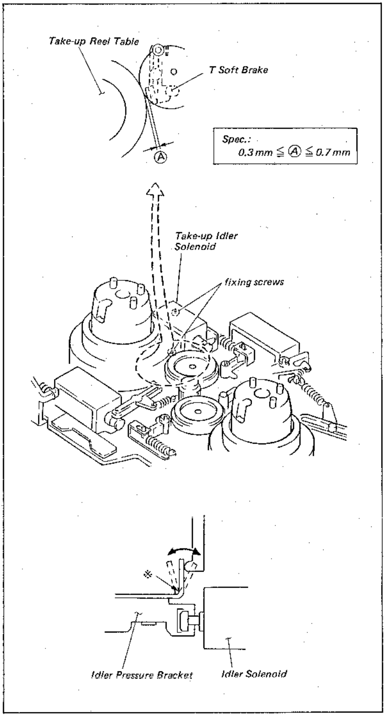
Tool: Thickness gauge

Check procedure:

(1) Push the plunger of the T Idler Solenoid in as far as possible by hand. Check that the clearance between Take-up Reel Rable and T Soft Brake meets the required specification.

Adjustment procedure:

(1) Bend the ※ marked portion of the Idler Pressure Bracket in the direction of the arrow so that it meets the required specification.


Take-up Reel Table
T Soft Brake
Spec.:
0.3 mm ≦ Ⓐ ≦ 0.7 mm
Ⓐ
Take-up Idler Solenoid
fixing screws
※
Idler Pressure Bracket
Idler Solenoid

5-2-2. S Soft Brake Clearance Adjustment (Unthreading end mode)

Mode: Unthreading end

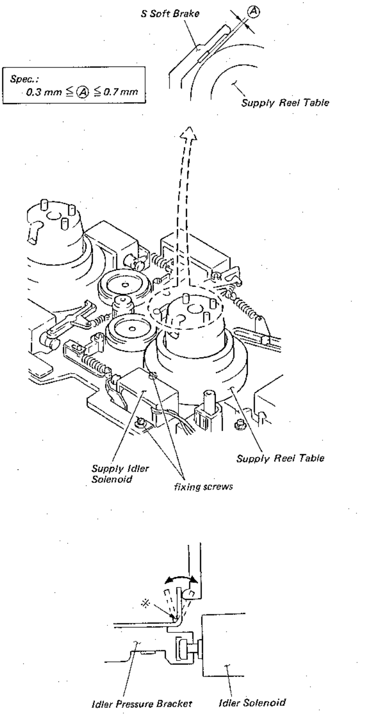
Tool: Thickness gauge

Check procedure:

(1) Push the plunger of the S Idler Solenoid in as far as possible by hand. Check that the clearance between the Supply Reel Table and the S Soft Brake meets the required specification.

Adjustment procedure:

(1) Bend the ※ marked portion of the Idler Pressure Bracket in the direction of the arrow so that it meets the required specification.



Spec.:
0.3 mm ≦ Ⓐ ≦ 0.7 mm

S Soft Brake
Ⓐ
Supply Reel Table
Supply Idler Solenoid
fixing screws
Supply Reel Table
※
Idler Pressure Bracket
Idler Solenoid

5-2-3. S Soft Brake Clearance Adjustment (Threading end mode)

Mode: Threading end

Tool: Thickness gauge

Check procedure:

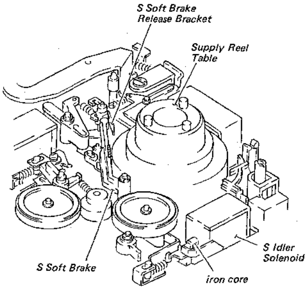
(1) Push the plunger of the Pinch Solenoid in as far as possible by hand. Check that the clearance between the Supply Reel Table and the S Soft Brake meets the required specification (1).

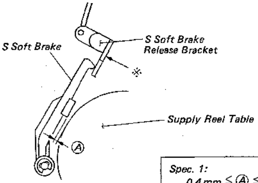
(2) Turn the Supply Reel Table by hand. Check that the clearance between the Supply Reel Table and the S Soft Brake meets the required specification (1) in every position.

(3) Release the plunger of the Pinch Solenoid from the fully engaged position. Check that the clearance between the S Soft Brake Arm and the S Soft Brake Release Bracket meets the required specification (2).

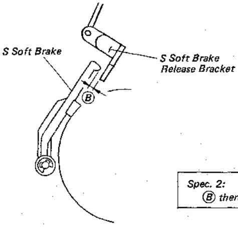
Adjustment procedure:

(1) Bend the ※ marked portion of the S Soft Brake Release Bracket in the direction of the arrow so that it meets the required specifications (1) and (2).


S Soft Brake
Release Bracket
Supply Reel
Table
S Idler
Solenoid
S Soft Brake
iron core


S Soft Brake
S Soft Brake
Release Bracket
※
Supply Reel Table
Ⓐ

Spec. 1:
0.4 mm ≦ Ⓐ ≦ 0.8 mm


S Soft Brake
S Soft Brake
Release Bracket
Ⓑ

Spec. 2:
Ⓑ there is clearance

5-2-4. T Main Brake Clearance Adjustment

Mode: Unthreading end

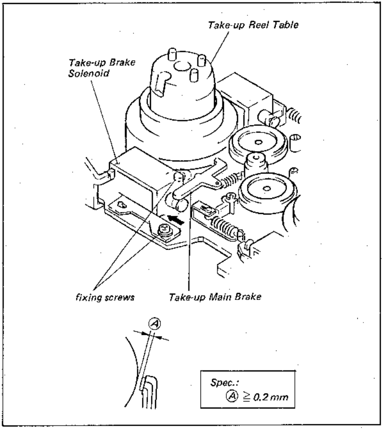
Tool: Thickness gauge

Check procedure:

(1) Push the plunger of the Take-up Brake Solenoid in as far as possible by hand. Check that the clearance between the Take-up Reel Table and the Take-up Main Brake meets the required specification.

Adjustment procedure:

(1) Adjust the position of the brake solenoid to meet the required specification.


Take-up Reel Table
Take-up Brake Solenoid
fixing screws
Take-up Main Brake
Ⓐ

Spec.:
Ⓐ $\geqq 0.2$ mm

5-2-5. S Main Brake Clearance Adjustment

Mode: Unthreading end

Tool: Thickness gauge

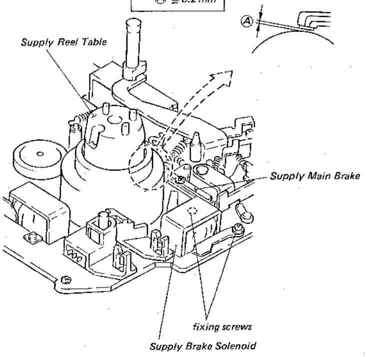
Check procedure:

(1) Push the plunger of the S Brake Solenoid in as far as possible by hand. Check that the clearance between the Supply Reel Table and the Supply Main Brake meets the required specification.

Adjustment procedure:

(1) Adjust the position of the Brake Solenoid to meet the required specification.

Spec.:
Ⓐ $\geqq 0.2$ mm


Ⓐ
Supply Reel Table
Supply Main Brake
fixing screws
Supply Brake Solenoid

5-3. IDLER SYSTEM ADJUSTMENT

5-3-1. T/S Idler Solenoid Mounting Position Adjustment

Mode: Unthreading end

Check procedure:

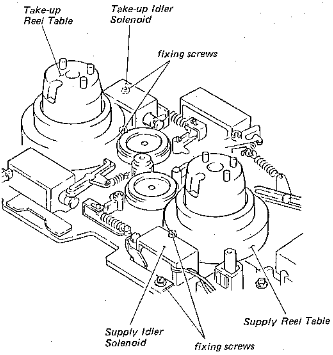
(1) Push the plunger of the S Idler Solenoid in as far as possible by hand. Check that the clearance between the end of the plunger and the Idler Solenoid Base meets the required specification.

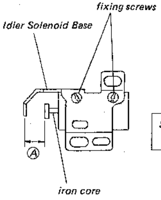
(2) Repeat Step (1) with the T Idler Solenoid. Check that the clearance between the end of the plunger of the T Idler Solenoid and the Idler Solenoid Base meets the required specification.

Adjustment procedure:

(1) Remove the Idler Solenoid Block from the machine.

(2) Adjust the mounting position of the Idler Solenoid to meet the required specification.


Take-up Reel Table
Take-up Idler Solenoid
fixing screws
Supply Reel Table
Supply Idler Solenoid
fixing screws


fixing screws
Idler Solenoid Base
Ⓐ
iron core

Spec.:
2.3 mm ≤ Ⓐ ≤ 2.7 mm

5-3-2. T Idler Pressure Bracket Clearance Adjustment

Mode: Unthreading end

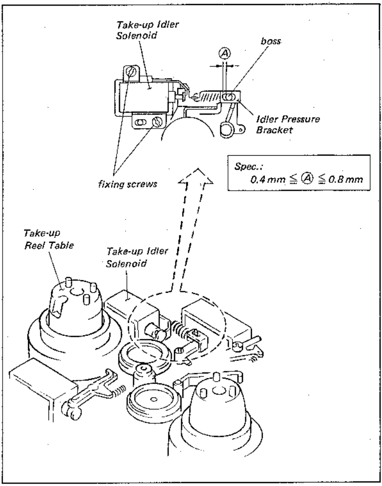
Tool: Thickness gauge

Check procedure:

(1) Push the plunger of the T Idler Solenoid in as far as possible by hand. Check that the clearance between the boss and the Idler Pressure Bracket meets the required specification.

Adjustment procedure:

(1) Adjust the position of the Idler Solenoid to meet the required specification.


Take-up Idler Solenoid
boss
Ⓐ
Idler Pressure Bracket
fixing screws
Spec.:
0.4 mm ≦ Ⓐ ≦ 0.8 mm
Take-up Reel Table
Take-up Idler Solenoid

5-3-3. S Idler Pressure Bracket Clearance Adjustment

Mode: Unthreading end

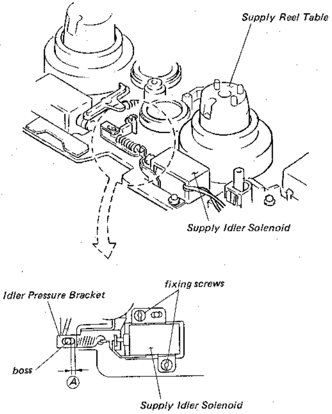
Tool: Thickness gauge

Check procedure:

(1) Push the plunger of the S Idler Solenoid in as far as possible by hand. Check that the clearance between the boss and the Idler Pressure Bracket meets the required specification.

Adjustment procedure:

(1) Adjust the position of the Idler Solenoid to meet the required specification.


Supply Reel Table
Supply Idler Solenoid
fixing screws
Idler Pressure Bracket
boss
Ⓐ
Supply Idler Solenoid

Spec.:
0.4 mm ≦ Ⓐ ≦ 0.8 mm

5-4. TENSION REGULATOR SOLENOID MOUNTING POSITION ADJUSTMENT

Mode: Unthreading end

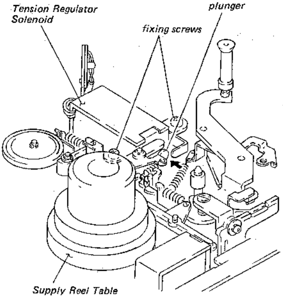
Check procedure:

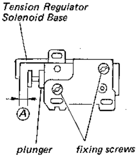
(1) Push the plunger of the Tension Regulator Solenoid in as far as possible by hand. Check that the clearance between the end of the plunger and the Tension Regulator Solenoid Base meets the required specification.

Adjustment procedure:

(1) Remove the Tension Regulator Block from the machine.

(2) Adjust the mounting position of the Tension Regulator Solenoid to meet the required specification.


Tension Regulator Solenoid
plunger
fixing screws
Supply Reel Table


Tension Regulator Solenoid Base
Ⓐ
plunger
fixing screws

Spec.:
3.3 mm ≦ Ⓐ ≦ 3.7 mm

5-5. SWITCH SYSTEM ADJUSTMENT

5-5-1. Cassette-in Switch ON Point Adjustment

Mode: Unthreading end

Tool: Reel table height check base jig

Check procedure:

(1) Place the reel table height check base jig on the Cassette Pillars of the drum as shown in the figure.

(2) Slowly lower the reel table height check base jig in the direction of the arrow.

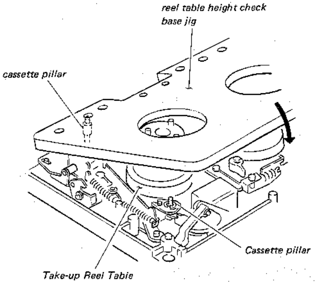
(3) When the Cassette-in Switch is turned ON (listen for the click sound), check that the clearance between the Cassette Pillar and the jig meets the required specification (1).

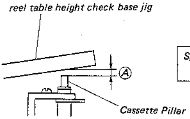
(4) Place the reel table height check base jig on the Cassette Pillars.

(5) Press down on the Switch Pin. Check that this Switch Pin moves. (Spec.(2))

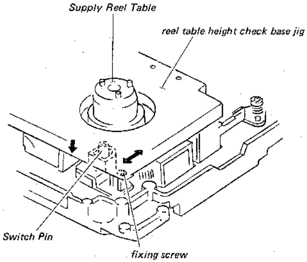
Adjustment preocedure:

(1) Move the position of the Cassette-in Switch Block in the direction of the arrow to meet the required specifications (1) and (2).


reel table height check base jig
cassette pillar
Cassette pillar
Take-up Reel Table


reel table height check base jig
Ⓐ
Cassette Pillar

Spec. 1:
1.2 mm ≦ Ⓐ ≦ 2.2 mm


Supply Reel Table
reel table height check base jig
Switch Pin
fixing screw

Spec. 2:
move the switch pin

5-5-2. Mis-recording Switch Position Adjustment

Mode: Unthreading end

Tool: Cassette tape (Never use the alignment tape)
Small mirror for adjustment

Check procedure:

(1) Check that the red cap is installed in the Erroneous-erasure-prevention hole of the cassette tape. Insert this cassette tape in the Cassette-up Compartment and lower the Compartment.

(2) Check that the VTR can be put into the Record mode.

(3) Remove the cassette tape.

(4) Apply three pieces of vinyl tape on the red cap as shown in the figure.

(5) Put the cassette tape in home position again.

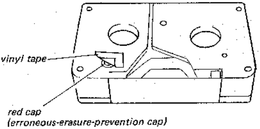
(6) Check with mirror that there is no clearance between the Cassette Pillar and the cassette tape.

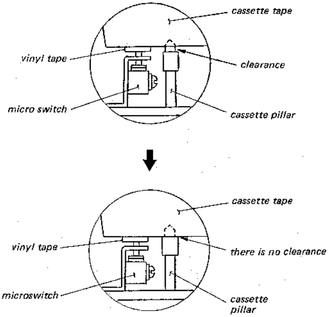
Adjustment procedure:

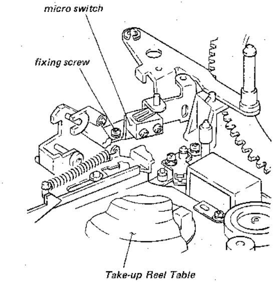
(1) Remove the Mis-recording Switch Block from the machine.

(2) Adjust the position of the microswitch to meet the required specification.

(3) Install the Mis-recording Switch Block in the machine and check it again.


vinyl tape
red cap
(erroneous-erasure-prevention cap)


cassette tape
vinyl tape
clearance
micro switch
cassette pillar
cassette tape
vinyl tape
there is no clearance
microswitch
cassette
pillar


micro switch
fixing screw
Take-up Reel Table

5-5-3. Cassette Lock Switch Position Adjustment

- This adjustment is performed with the Cassette-up Compartment installed in the VTR.

Mode: Cassette up

Tool: Circuit tester
Oscilloscope

Preparation:

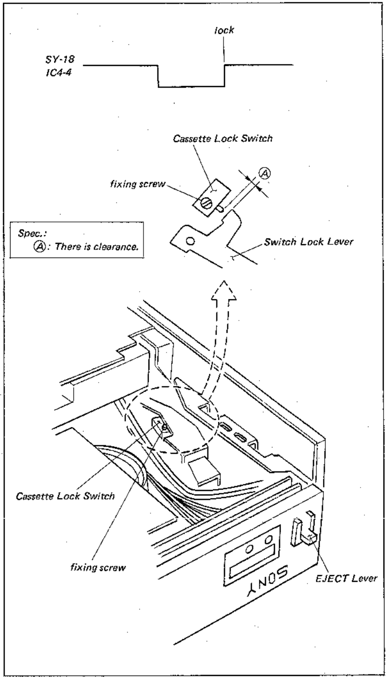
(1) Connect the oscilloscope to IC4, Pin 4/SY-18 Board.

Check procedure:

(1) Insert the cassette-tape into the Cassette-up Compartment.
(2) Depress the Cassette-up Compartment slowly.
(3) Check that the level changes from High to Low before the Cassette-up Compartment locks.
(4) Depress the Cassette-up Compartment further until it locks.
(5) Check that the level changes from Low to High soon after the compartment locks.
(6) Open the printed circuit board, and locate the Cassette Lock Switch.
(7) Perform the Steps (1) and (2) again.
(8) Check that there is clearance between the Switch Lock Lever and the microswitch when the Cassette Lock Switch is in the ON position.

Adjustment procedure:

(1) Adjust the position of the Cassette Lock Switch to meet the required specification.


lock
SY-18
IC4-4
Cassette Lock Switch
fixing screw
Ⓐ
Switch Lock Lever
Cassette Lock Switch
fixing screw
EJECT Lever
SONY

Spec.:
Ⓐ: There is clearance.

5-5-4. Reed Switch (TEN-REG, SW) Clearance Adjustment

- This adjustment is required only when the reed switch of the Tension Regulator is replaced or removed.

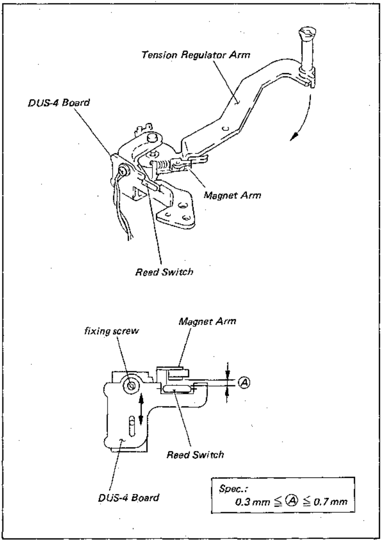
Tool: Thickness gauge

Check procedure:

(1) Check that the clearance between the magnet and the reed switch of the Magnet Arm Block meets the required specification.

Adjustment procedure:

(1) Adjust the position of the DUS-4 Board to meet the required specification.
(NOTE: Don't press the excessive forth to the reed switch.)


Tension Regulator Arm
DUS-4 Board
Magnet Arm
Reed Switch
Magnet Arm
fixing screw
Ⓐ
Reed Switch
DUS-4 Board

Spec.:
0.3 mm ≦ Ⓐ ≦ 0.7 mm

5-5-5. S-Tension Regulator Arm Magnet Position Adjustment

Mode: Play mode without cassette tape

Check procedure:

(1) Set SW1 on SY-22 board to on.

(2) Set the last two digit of the counter roller to OL using the tape timer reset button.

(3) Move S-tension regulator so that the position of the guide roller is in specification as shown Fig1,2.

(4) Then the leftmost digit of the counter should be changed to 1 to 0.

Adjustment procedure:

(1) Perform check item (1) and (2).

(2) Loosen the magnet arm fixing screw quater to half turn.(Fig3)

(3) Adjust the magnet arm position using 3mm flat driver so that the leftmost digit of the counter display is changed 1 to 0 when the guide roller position is in specification as shown Fig2.
Tighten the magnet arm fixing screw.

(4) Perform check item (3) and (4).

(5) Set SW1 on SY-22 board to OFF.

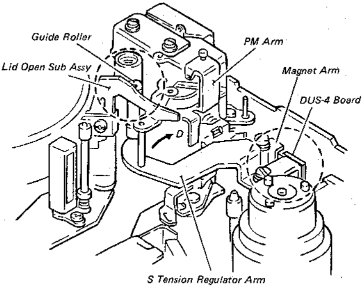
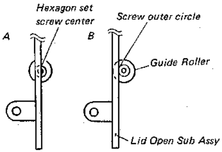

Guide Roller
PM Arm
Lid Open Sub Assy
Magnet Arm
DUS-4 Board
D
S Tension Regulator Arm

Fig-1


Hexagon set screw center
A
B
Screw outer circle
Guide Roller
Lid Open Sub Assy

Spec.:
Guide roller position is within a range of A to B.

Fig-2

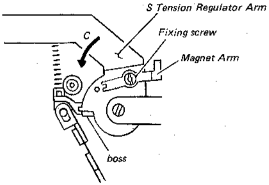

S Tension Regulator Arm
C
Fixing screw
Magnet Arm
boss

Fig-3

5-5-6. Eject Switch ON Point Adjustment

Mode: Unthreading end

Check procedure:

(1) Press slowly on the EJECT button, and move the E stopper in the direction of the arrow.

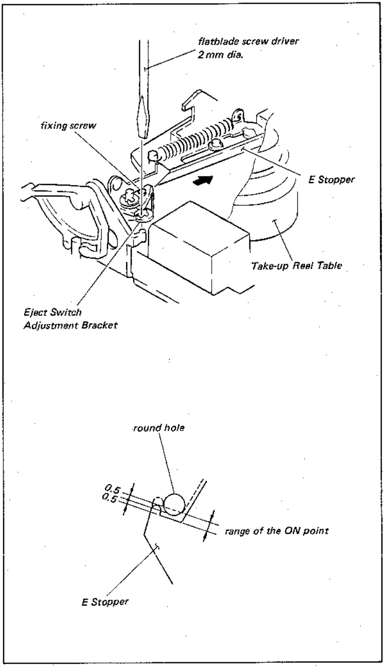
(2) With the Eject Switch in the ON position (listen for click sound), check that the positional relationship between the U groove of the E Stopper and the round hole in the chassis meets the required specification.

(Supplement to the specification: the switch must turn ON while the top of the U groove of the E Stopper is between a point 0.5 mm ahead of the round hole in chassis and the center of the round hole.)

Adjustment procedure:

(1) Loosen the fixing screw of the Eject Switch Adjustment Bracket about 1/2 to 1 turn.

(2) Insert a flatblade screwdriver (2 mm dia.) into the adjusting hole and adjust the position of the Eject Switch Adjustment Bracket so that it meets the required specification.


flatblade screw driver
2 mm dia.
fixing screw
E Stopper
Take-up Reel Table
Eject Switch
Adjustment Bracket
round hole
0.5
0.5
range of the ON point
E Stopper

5-6. PC-22 BOARD MOUNTING POSITION ADJUSTMENT

- This adjustment is required when the Photo Interrupter of the PC-22 Board is replaced.

Mode: Unthreading end

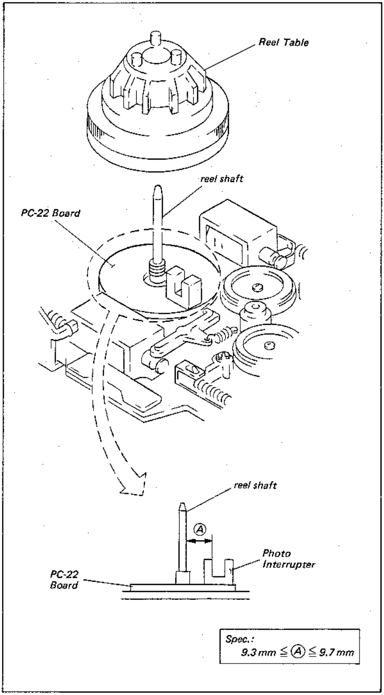
Tool: Scale

Check procedure:

(1) Check that the distance (shown in the figure) between the outside of the reel shaft and the Photo Interrupter meets the required specification.

Adjustment procedure:

(1) Adjust the mounting position of PC-22 Board to meet the required specification.


Reel Table
reel shaft
PC-22 Board
reel shaft
Ⓐ
Photo Interrupter
PC-22 Board
Spec.:
9.3 mm ≦ Ⓐ ≦ 9.7 mm

5-7. THREADING SYSTEM ADJUSTMENT

5-7-1. Threading Ring Rotation Adjustment

- This adjustment is required when the Threading Ring or Ring Support is replaced.

Mode: Turn the Threading Ring until the ring is turned back 180 degrees from the Unthreading-end state.

Check procedure:

(1) Check that the horizontal play meets the required specification when the Threading Ring is pushed by hand in the direction of the arrow.

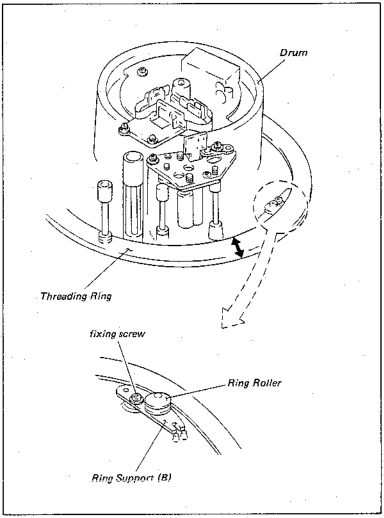
(2) Check that the rotation of the Threading Ring into the Threading mode and the Unthreading mode is smooth.

Adjustment procedure:

(1) Adjust the position of the Ring Support (B) Ass'y to meet the required specification.

Adjusting procedure;

- Insert a 0.2 mm thick piece of paper between the Threading Ring and the Ring Roller.
- The paper of this manual is about 0.1 mm thick; therefore two sheets would be 0.2 mm thick.



5-7-2. Threading Ring Engaging Adjustment

Mode: Unthreading end

Tool: 0.5 mm dia. clearance check gauge

Check procedure:

(1) Check that the clearance between the Threading Ring and the gear of the gear box meets the required specification.

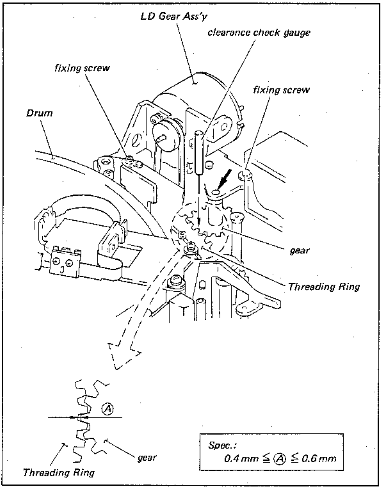
Adjustment procedure:

(1) Loosen the fixing screws of the gear box about 1 to 2 turns.

(2) Insert the 0.5 mm dia. clearance check gauge between the Threading Ring and the gear of the gear box.

(3) Press the gear box lightly toward the Threading Ring.

(4) Tighten the fixing screws of the gear box, and check that the clearance meets the required specification.


LD Gear Ass'y
clearance check gauge
fixing screw
fixing screw
Drum
gear
Threading Ring
Ⓐ
gear
Threading Ring
Spec.:
0.4 mm ≦ Ⓐ ≦ 0.6 mm

5-7-3. Threading/Unthreading Switch Position Adjustment

Mode:

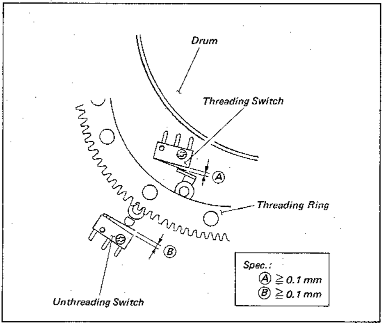
(1) Turn the LD Pulley of the gear box block from the Unthreading-end state until the Unthread End Switch is turned ON.

Check procedure:

(1) Check that the clearances (A) and (B) between the micro switch and the actuators meet the required specifications.

Adjustment procedure:

(1) Adjust the position of each micro switches to meet the required specifications.


Drum
Threading Switch
Ⓐ
Threading Ring
Ⓑ
Unthreading Switch
Spec.:
Ⓐ ≧ 0.1 mm
Ⓑ ≧ 0.1 mm

5-7-4. Threading Ring Stop Position Adjustment

Mode: Threading end

Tool: Thickness gauge

Check procedure:

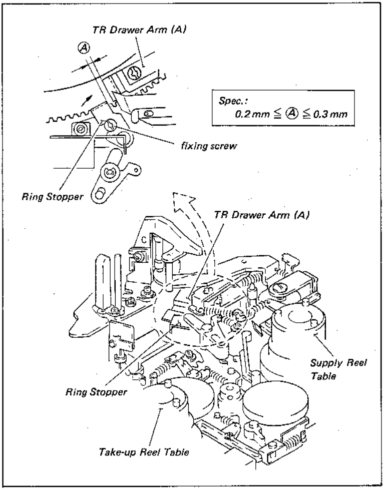
(1) Turn the pulley of the Gear Box Block by hand in the unthreading direction until the belt slips.

(2) Check that the clearance between the Stopper Plate and the Ring Stopper meets the required specification.

Adjustment procedure:

(1) Loosen the fixing screw of the Ring Stopper about 1 turn.

(2) Move the Ring Stopper in the direction of the arrow so that it meets the required specification.


TR Drawer Arm (A)
Ⓐ
Spec.:
0.2 mm ≦ Ⓐ ≦ 0.3 mm
fixing screw
Ring Stopper
TR Drawer Arm (A)
Supply Reel Table
Ring Stopper
Take-up Reel Table

5-7-5. Tape Stopper Position Adjustment

Mode: Threading end

Tool: Thickness gauge

Check procedure:

(1) Push the plunger of the Tension Regulator Solenoid in as far as possible by hand. Check that the clearance (A) between the capstan and the pinch roller, and between the pinch roller flange and the pinch press lever meet the required specification while still keeping Tension Regulator Solenoid.

(2) Push the plunger of the Pinch Solenoid to ON state in as far as possible by hand. Check that the clearance (C) between the Pinch Roller and the Tape Stopper.

Adjustment procedure:

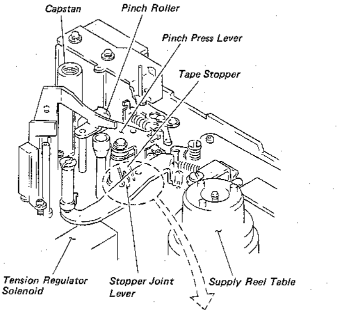
(1) Push the plunger of the Tension Regulator Solenoid in as far as possible by hand.

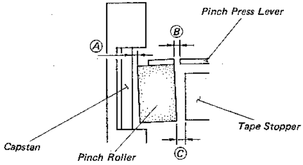
(2) Bend the ※ marked portion of the Stopper Joint Lever to meet the required specification.

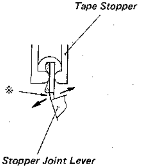
(3) Put the Pinch Solenoid into ON state.

(4) Check Spec.

If it does not meet the required specification, repeat Steps (1) and (2) to meet the required specification.


Capstan
Pinch Roller
Pinch Press Lever
Tape Stopper
Tension Regulator Solenoid
Stopper Joint Lever
Supply Reel Table


Pinch Press Lever
Ⓑ
Ⓐ
Tape Stopper
Capstan
Pinch Roller
Ⓒ


Tape Stopper
※
Stopper Joint Lever

Spec.:

0.2 mm ≦ Ⓐ ≦ 0.4 mm

Ⓑ ≧ 0.1 mm

Ⓒ ≧ 0.2 mm

Ⓐ, Ⓒ: Narrower clearance at top or bottom portion.

5-8. S-TENSION REGULATOR ARM OPERATING POSITION ADJUSTMENT

5-8-1. S-tension Regulator Arm Operating Position Adjustment

Mode: Playback mode

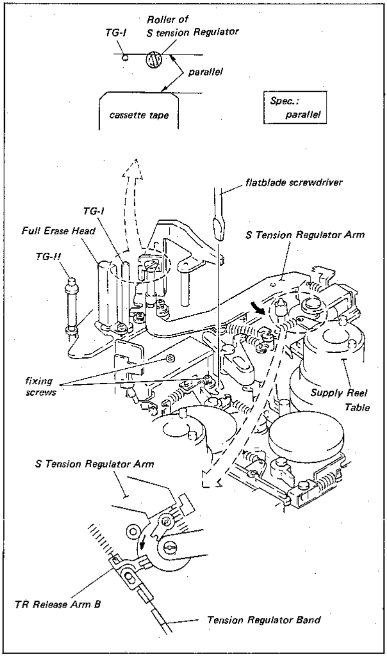
Tool: Cassette tape

Check procedure:

(1) Insert the cassette tape, and put the machine into the PLAY mode. Check that the positional relationship between the roller of the S-tension Regulator Arm and TG-I meets the required specification.

Adjustment procedure:

(1) Adjust the position of the Tension Regulator Solenoid to meet the required specification.


Roller of
S tension Regulator
TG-I
parallel
cassette tape
Spec.:
parallel
flatblade screwdriver
TG-I
Full Erase Head
TG-II
S Tension Regulator Arm
fixing
screws
Supply Reel
Table
S Tension Regulator Arm
TR Release Arm B
Tension Regulator Band

5-8-2. TR Stopper A Clearance Adjustment

Mode: PLAY mode without cassette tape

Tool: Thickness gauge

Check procedure:

(1) Put the machine into the PLAY mode without a cassette tape.

(2) Check that the iron core of the S Tension Regulator Solenoid is energized completely.

(3) Move the S Tension Regulator Arm in the direction of the arrow C with finger so that the S Tension Regulator Arm contacts the boss of the TR Release Arm (B).

(4) Check that the clearance between the S Tension Regulator Arm and the TR Stopper A meets the required specification.

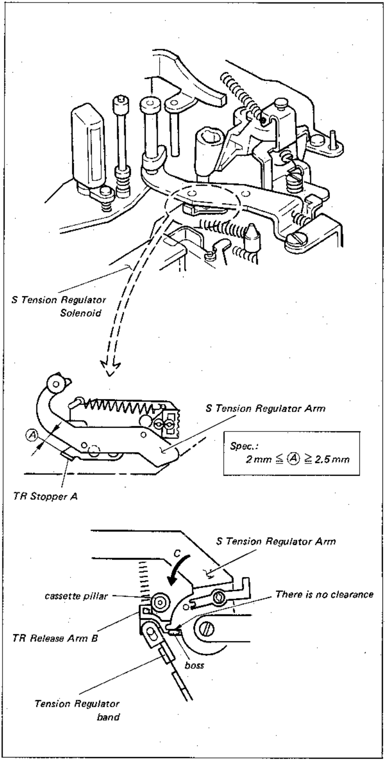
Adjustment procedure:

(1) Put the machine into STOP mode.

(2) Loosen the fixing screw of the TR Stopper A about 1/4 to 1/2 turn.

(3) Move the TR Stopper A to meet the required specification.

(4) Put the machine into the PLAY mode without cassette tape, and check that the clearance meets the required specification.


S Tension Regulator Solenoid
S Tension Regulator Arm
Ⓐ
Spec.:
2 mm ≦ Ⓐ ≧ 2.5 mm
TR Stopper A
S Tension Regulator Arm
C
cassette pillar
There is no clearance
TR Release Arm B
boss
Tension Regulator band

5-9. PINCH PRESS MECHANISM BLOCK ADJUSTMENT

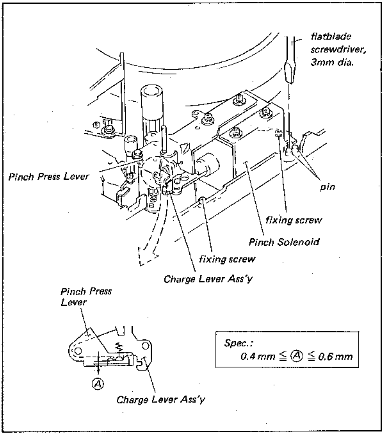
5-9-1. Pinch Press Mechanism Block Position Andjustment

Mode: PLAY mode without a cassette tape
Tool: Thickness gauge
Check procedure:

(1) Put the machine into the PLAY mode without a cassette tape.
(2) Check that the clearance between the Pinch Press Lever and Charge Lever meets the required specification.

Adjustment procedure:

(1) Loosen the fixing screws of the Pinch Press Mechanism Block about 1/2 to 1 turn.
(2) Insert a flatblade screwdriver (3 mm dia.) into the notch of the Pinch Press Mechanism Block, and adjust the Pinch Press Mechanism Block position to meet the required specification.


flatblade screwdriver, 3mm dia.
Pinch Press Lever
pin
fixing screw
Pinch Solenoid
fixing screw
Charge Lever Ass'y
Pinch Press Lever
Ⓐ
Charge Lever Ass'y
Spec.:
0.4 mm ≦ Ⓐ ≦ 0.6 mm

5-9-2. PM Arm A Clearance Adjustment

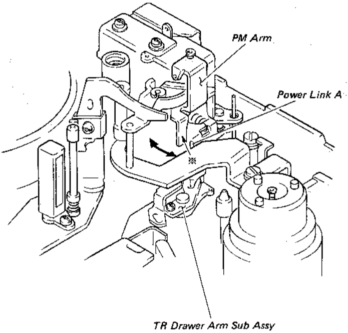
Mode: Threading end mode to PLAY mode

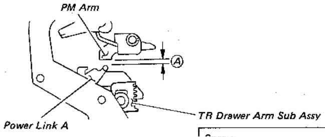
Check procedure:

1. (1) Put the machine into the threading-end mode.
2. (2) Check that the Pinch Solenoid is not energized.
3. (3) Check that the clearance (A) between the PM Arm and the Power Link A of the TR Drawer Arm Sub Assy meets the required specification.
4. (4) Put the machine into the PLAY mode.
5. (5) Check that the Pinch Solenoid is energized.
6. (6) Check that the clearance (B) between the TR Drawer Arm B and the Power Link A meets the required specification.

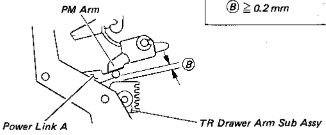
Adjustment procedure:

1. (1) Put the machine into the unthreading-end mode.
2. (2) Bend the ※ portion of the PM Arm.
3. (3) Check as check procedure, check that the clearances (A) and (B) meet the required specification.


PM Arm
Power Link A
※
TR Drawer Arm Sub Assy


PM Arm
Ⓐ
Power Link A
TR Drawer Arm Sub Assy

Spec.:
0.8mm ≦ Ⓐ ≦ 1.2mm
Ⓑ ≧ 0.2mm


PM Arm
Ⓑ
Power Link A
TR Drawer Arm Sub Assy

5-10. E SLIDER ADJUSTMENT

5-10-1. E Slider Position Adjustment

Mode: Threading end

Tool: Thickness gauge

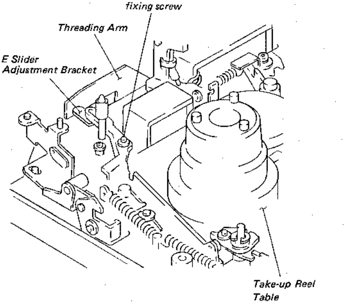
Check procedure:

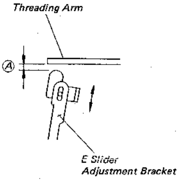
(1) Check that the clearance between the Threading Arm and the E Slider Adjustment Bracket meets the required specification.

Adjustment procedure:

(1) Loosen the fixing screws of the E Slider Adjustment Bracket about 1/2 to 1 turn.

(2) Adjust the position of the E Slider Adjustment Bracket to meet the required specification.


fixing screw
Threading Arm
E Slider Adjustment Bracket
Take-up Reel Table


Threading Arm
Ⓐ
E Slider Adjustment Bracket

Spec.:
0.5 mm ≦ Ⓐ ≦ 1 mm

5-10-2. E Slide Stopper Position Adjustment

Mode: Unthreading end

Tool: Thickness gauge

Check procedure:

(1) Press slowly on the EJECT button, and move the E Slider Ass'y in the direction of arrow A. Check that the clearance between the roller and the E Stopper meets the required specification.

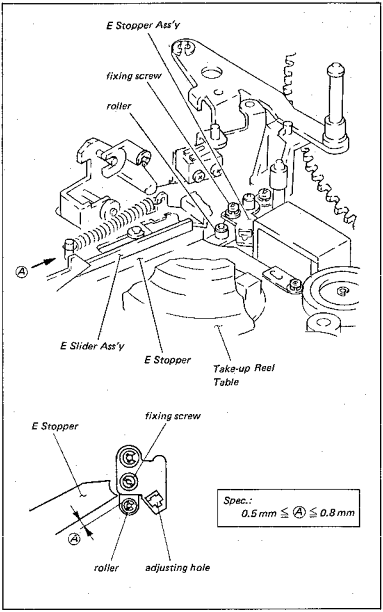
Adjustment procedure:

(1) Loosen the fixing screw of the E Stopper Ass'y about 1/2 to 1 turn.

(2) Insert a flatblade screw driver (2 mm dia.) into the adjusting hole and adjust the E Stopper Ass'y position so that it meets the required specification.

(3) Turn the pulley of the gear box block by hand. After advancing the Threading Ring about 10 mm, tighten the fixing screw.

(4) After tightening, check again.


E Stopper Ass'y
fixing screw
roller
Ⓐ
E Slider Ass'y
E Stopper
Take-up Reel Table
E Stopper
fixing screw
Ⓐ
roller
adjusting hole

Spec.:
0.5 mm ≦ Ⓐ ≦ 0.8 mm

5-11. BAND HOLDER MOUNTING POSITION ADJUSTMENT

Mode: Unthreading end

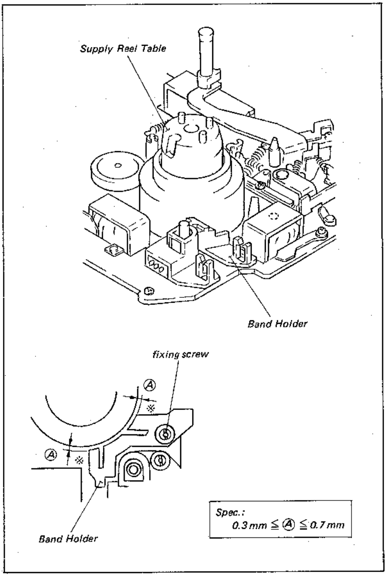
Tool: Thickness gauge

Check procedure:

(1) Check that the clearances between the ※ marked portions (two spots) of the Band Holder and the Supply Reel Table meet the required specification.

Adjustment procedure:

(1) Adjust the position of the Band Holder to meet the required specification.


Supply Reel Table
Band Holder
fixing screw
Ⓐ
※
Ⓐ
※
Band Holder

Spec.:
0.3 mm ≦ Ⓐ ≦ 0.7 mm

5-12. DAMPER POSITION ADJUSTMENT OF CASSETTE-UP COMPARTMENT

. This adjustment is performed with Cassette-up Compartment removed from the unit.

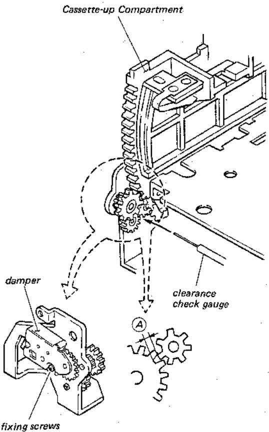
Tool: Clearance check gauge

Check procedure:

(1) Check that the clearance between the gear of the Cassette-up Compartment and the gear of the Damper Block meets the required specification.

Adjustment procedure:

(1) Adjust the position of the Damper Block to meet the required specification.


Cassette-up Compartment
damper
clearance check gauge
Ⓐ
fixing screws

Spec.: Ⓐ
clearance: 0.2 mm ~ 0.4 mm

5-13. CASSETTE LID OPENER BRACKET POSITION ADJUSTMENT

Mode: Unthreading end
Tool: Cassette tape

Check procedure:

(1) Release the lock of the cassette lid, and open the lid.

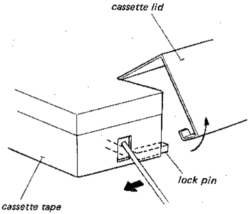
(2) Insert the cassette tape in the Cassette-up Compartment and lower the Compartment.

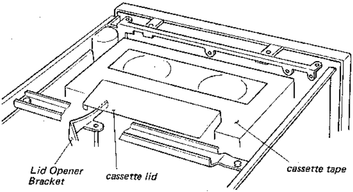
(3) Check that the positional relationship between the Lid Opener Bracket and the groove of the cassette tape meets the required specification.

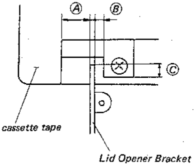
Adjustment procedure:

(1) Adjust the mounting position of the Lid Opener Bracket to meet the required specification.

(2) If they do not meet the required specification in Step (1), bend the Lid Opener Bracket. After this adjustment, the REV Guide Slantness Adjustment must be performed.


cassette lid
lock pin
cassette tape


Lid Opener Bracket
cassette lid
cassette tape


Ⓐ
Ⓑ
Ⓒ
cassette tape
Lid Opener Bracket

Spec.:
Ⓐ $\geqq$ 6.0 mm
Ⓑ $\geqq$ 0.5 mm
Ⓒ $\geqq$ 1 mm

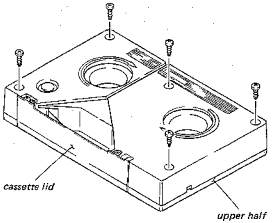
SECTION 6
TORQUE AND BACK TENSION ALIGNMENT

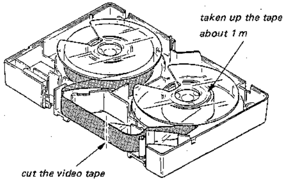
ALIGNMENT INFORMATION

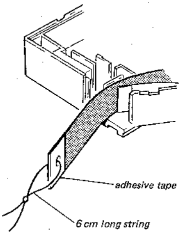
- Local specially-made Cassette Tape for the PLAY Back Tension Adjustment.

This cassette tape is used for the PLAY Back Tension Adjustment.
Prepare this tape as follows:

(1) Wind the KCS-20 cassette tape to the tape beginning portion.
(2) Remove the five screws on back of the cassette tape, and remove the Upper Half of the cassette.
(3) Taken up the video tape on the take-up reel about 1 meter. Cut the video tape at the position as shown in the figure. Remove the take-up reel from the cassette.
(4) Attach an adhesive tape on an end of the hole on the adhesive tape.
(5) Make a loop of 6 cm long string through the hole.


cassette lid
upper half


taken up the tape about 1 m
cut the video tape


adhesive tape
6 cm long string

6-1. SOFT BRAKE SYSTEM ADJUSTMENT

6-1-1. Take-up Soft Brake Torque Adjustment

Mode: Unthreading end

Tool: Reel table torque measurement jig (40 mm dia.)

Tension scale (30 g full scale)

Check procedure:

(1) Wind the tape in the clockwise direction on the reel table torque measurement jig.

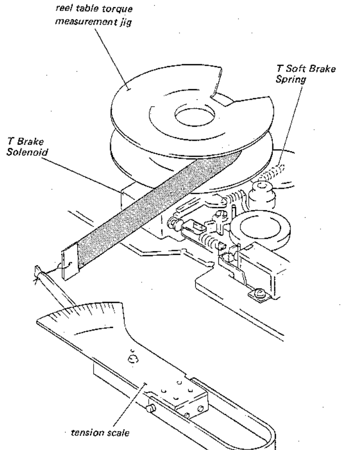
(2) Install the measurement jig on the Take-up Reel Table, and hook a tension scale on the end of the tape.

(3) Push the plunger of the T Brake Solenoid in as far as possible by hand.
(Hold it in place, the fully engaged position.)

(4) In the fully engaged position, pull the tension scale at a constant speed of approx. 10 cm/sec. in the direction of the arrow, as shown in figure. Check that the scale reading meets the required specification.

Adjustment procedure:

(1) Replace the T Soft Brake, or adjust it by straightening or cutting off the spring of the Soft Brake.



Spec.:
5~15 g
(10~30 g.cm)

6-1-2. S Soft Brake Torque Adjustment

Mode: Unthreading end

Tool: Reel table torque measurement jig (40 mm dia.)
Tension scale (30 g full scale)

Check procedure:

(1) Push down the Cassette-in Switch Pin, and insert the paper between the Pin and the Holder so that the Pin does not rise up.

(2) Wind the tape in the clockwise direction on the reel table torque measurement jig.

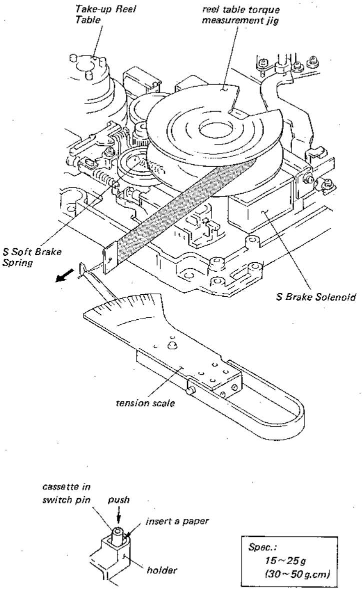
(3) Install the measurement jig on the Supply Reel Table, and hook a tension scale on the end of the tape. Check that the Reel Hub does not contact with the paper that is inserted into Step (1).

(4) Push the plunger of the S Brake Solenoid in as far as possible by hand. (Hold it in place, the fully engaged position.)

(5) In the fully engaged position, pull the tension scale at a constant speed of approx. 10 cm/sec. in the direction of the arrow, as shown in the figure. Check that the scale reading meets the required specification.

Adjustment procedure:

(1) Replace the S Soft Brake, or adjust it by straightening or cutting off the spring of the Soft Brake.


Take-up Reel Table
reel table torque measurement jig
S Soft Brake Spring
S Brake Solenoid
tension scale
cassette in switch pin
push
insert a paper
holder

Spec.:
15~25g
(30~50g.cm)

6-2. MAIN BRAKE SYSTEM ADJUSTMENT

6-2-1. Take-up Main Brake Torque Adjustment

Mode: Unthreading end

Tool: Reel table torque measurement jig (40 mm dia.)
Tension scale (500 g full scale)

Check procedure:

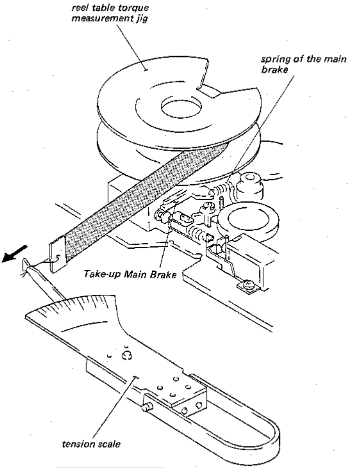
(1) Wind the tape in the clockwise direction on the reel table torque measurement jig.

(2) Install the measurement jig on the Take-up Reel Table, and hook a tension scale on the end of the tape.

(3) Pull the tape at a constant speed of approx. 10 cm/sec. in the direction of the arrow. Check that the scale reading meets the required specification.

Adjustment procedure:

(1) Replace the Take-up Main Brake, or adjust it by straightening or cutting off the spring of the main brake.


reel table torque measurement jig
spring of the main brake
Take-up Main Brake
tension scale

Spec.:
140~210 g
(280~420 g.cm)

6-2-2. Supply Main Brake Torque Adjustment

Mode: Unthreading end

Tool: Reel table torque measurement jig (40 mm dia.)

Tension scale (500 g full scale)

Check procedure:

(1) Push down the Cassette-in Switch Pin, and insert the paper between the Pin and the Holder so that the Pin does not rise up.

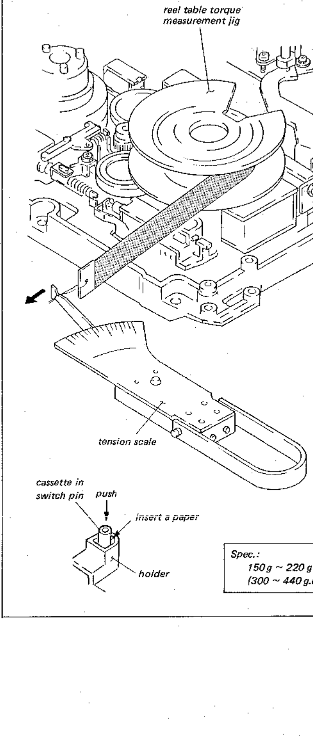
(2) Wind the tape on the reel table torque measurement jig in the clockwise direction.

(3) Install the measurement jig on the Supply Reel Table, and hook a tension scale on the end of the tape. Check that the Reel Hub does not contact with the paper that is inserted into Step (1).

(4) Pull the tape at a constant speed of approx. 10 cm/sec. Check that the scale reading meets the required specification.

Adjustment precedure:

(1) Replace the Supply Main Brake, or adjust it by straightening or cutting off the spring of the main brake.


reel table torque measurement jig
tension scale
cassette in switch pin
push
insert a paper
holder

Spec.:
150 g ~ 220 g
(300 ~ 440 g.cm)

6-3. PLAY BACK TENSION ADJUSTMENT

Mode: threading end

Tool: Local specially-made cassette tape for the PLAY Back Tension Adjustment. (Refer to the alignment information.)
Tension scale (100 g full scale)

Preparation:

(1) Open the SV-57 Board.

(2) Short between TP6/SY-22 Board and GND (frame) with a short clip lead. (Stop the function of the tape Slack Detection Circuit)

(3) Place the local specially-made cassette tape, and thread the tape as shown in the figure.

(4) Hook the tension scale on the end of the tape.

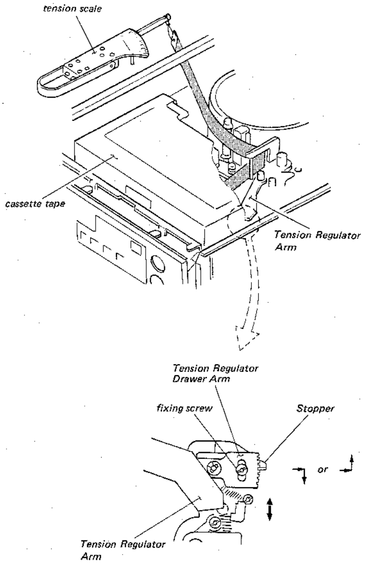
Check procedure:

(1) Put the machine into the PLAY mode.

(2) Pull the tape at a constant speed of approx. 9 cm/sec in the direction shown in the figure, and check that the scale reading meets the required specification.

Adjustment procedure:

(1) Adjust the position of the stopper in the direction of the arrow so that it meets the required specification.


tension scale
cassette tape
Tension Regulator Arm
Tension Regulator Drawer Arm
fixing screw
Stopper
or
Tension Regulator Arm

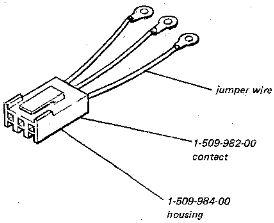
Spec.:
75~80 g

SECTION 7
TAPE RUN ALIGNMENT

ALIGNMENT INFORMATION

. Local Specially-made Connector for Tape Path Adjustment.

Make a following connector.


jumper wire
1-509-982-00
contact
1-509-984-00
housing

7-1. S-TENSION REGULATOR ARM SLANTNESS ADJUSTMENT

Mode: Threading end (POWER OFF)

Tool: Reel table height check base jig
Tape guide slantness check tool

Check procedure:

(1) Put the reel table height check base jig in the cassette's position.

(2) Push and lock the EJECT button.

(3) Turn the pulley of the gear box by hand so that the Tape Guide Roller of the S Tension Regulator Arm is to the right of TG-I.

(4) Place the tape guide slantness check tool against the Tape Guide Roller from directions A and B, as shown in the figure. Check that the slant of the guide roller meets the required specification.

Adjustment procedure:

(1) Loosen the fixing screw about 1 turn.

- When the slant is out of spec. while pressing from direction A,

(2) If there is clearance at the top portion, turn the adjusting screw (A) in the clockwise direction so that it meets the specification.

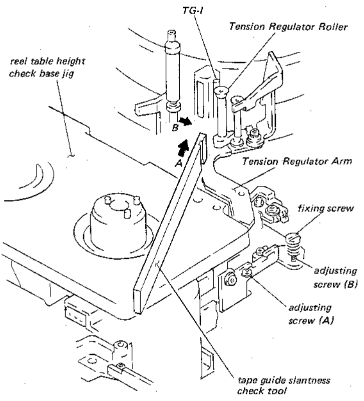
(3) If there is clearance at the bottom portion, turn the adjusting screw (A) in the counterclockwise direction so that it meets the specification.

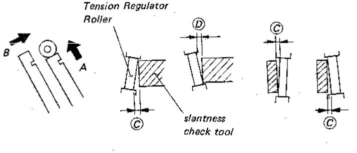
- When the slant is out of spec. while pressing from direction B,

(4) If there is clearance at the top portion, turn the adjusting screw (B) in the clockwise direction so that it meets the specification.

(5) If there is clearance at the bottom portion, turn the adjusting screw (B) in the counterclockwise direction so that it meets the specification.

(6) Tighten the fixing screw, and check again.


TG-I
Tension Regulator Roller
reel table height check base jig
B
A
Tension Regulator Arm
fixing screw
adjusting screw (B)
adjusting screw (A)
tape guide slantness check tool


Tension Regulator Roller
B
A
Ⓓ
Ⓒ
Ⓒ
slantness check tool
Ⓒ

pressing from direction A pressing from direction B

Spec.:
Ⓓ : There is no clearance.
Ⓒ ≦ 0.1 mm

7-2. REV GUIDE SLANTNESS ADJUSTMETN

Mode: Unthreading end

Tool: Reel table height check base jig
Tape guide slantness check tool

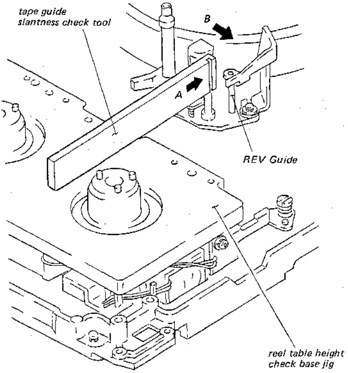
Check procedure:

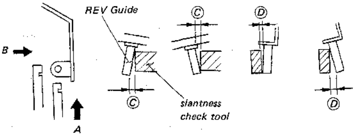
(1) Place the reel table height check base jig in the cassette's position.

(2) Place the tape guide slantness check tool against the REV Guide, as shown in the figure. Check that the slant meets the required specification.

Adjustment procedure:

(1) Push the lower side of the REV Guide by hand until it meets the required specifications (1) and (2).


tape guide slantness check tool
B
A
REV Guide
reel table height check base jig


REV Guide
B
A
©
Ⓓ
slantness check tool

pressing from direction A   pressing from direction B

Spec.:
© ≦ 0.5 mm
Ⓓ ≦ 0.2 mm

7-3. TU ARM SLANTNESS ADJUSTMENT

Mode: Threading end

Tool: Reel table height check base jig
Tape guide slantness check tool

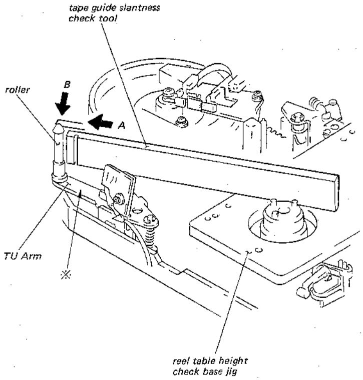
Check procedure:

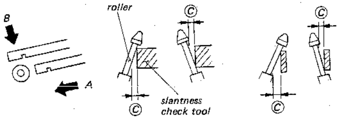
(1) Place the reel table height check base jig in the cassette's position.

(2) Place the tape guide slantness check tool against the roller of the TU Arm as shown in the figure. Check that the slant meets the required specification.

Adjustment procedure:

(1) Bend the ※ marked portion of the TU Arm so that it meets the required specification.


tape guide slantness check tool
roller
B
A
TU Arm
※
reel table height check base jig


B
A
roller
©
©
slantness check tool
©
©

pressing from direction A *pressing from direction B*

Spec.:
© ≦ 0.3 mm

7-4. TU ARM ROLLER GUIDE HEIGHT ADJUSTMENT

Mode: PLAY and F.FWD

Tool: Cassette tape, KCS-20 or equivalent

Check procedure:

(1) Insert the cassette tape and put the machine into the PLAY mode.

(2) Check that the tape runs in the middle of the cassette's Take-up Guide.

(3) Check that the tape runs in contact with the upper flange of the TU Arm.

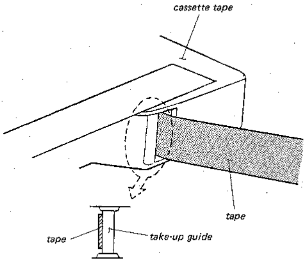
(4) Put the machine into the F.FWD mode.

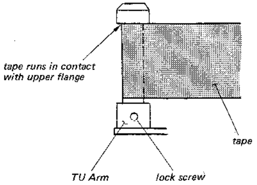
(5) Check in the same manner as Steps (2) and (3).

Adjustment procedure:

(1) Loosen the locking screw.

(2) Turn the upper flange of the tape guide to meet the required specification.


cassette tape
tape
tape
take-up guide


tape runs in contact
with upper flange
tape
TU Arm
lock screw

7-5. ERASE HEAD ZENITH ADJUSTMENT

Mode: Threading end

Tool: Reel table height check base jig
Tape guide slantness check tool

Check procedure:

(1) Install the reel table height check base jig in the cassette's position.

(2) Place the tape guide slantness check tool against the Erase Head, as shown in the figure. Check that the zenith meets the required specification.

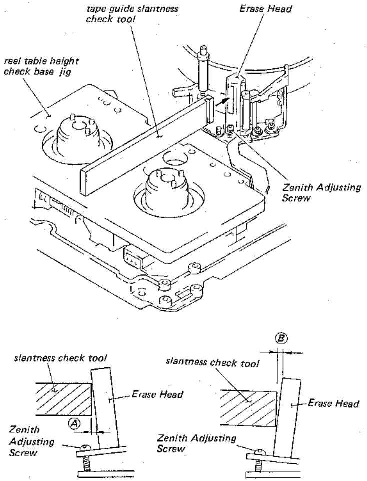
Adjustment procedure:

- When the clearance at the bottom portion is out of spec.,

(1) Turn the Zenith Adjusting Screw in the counterclockwise direction to meet the required specification.

- When the clearance at the top portion is out of spec.,

(2) Turn the Zenith Adjusting Screw in the clockwise direction to meet the required specification.


tape guide slantness check tool
Erase Head
reel table height check base jig
Zenith Adjusting Screw
slantness check tool
Erase Head
Ⓐ
Zenith Adjusting Screw
slantness check tool
Ⓑ
Erase Head
Zenith Adjusting Screw

Spec.:
Ⓐ : *There is no clearance.*
Ⓑ $\leqq$ *0.05 mm*

7-6. VIDEO TRACKING ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, RR5-3SA
Oscilloscope
Allen wrench (each edge has 1.27 mm)
Small mirror for adjustment
Local specially-made connector for the tape path adjustment (Refer to the alignment information)

Preparation:

(1) Connect the local specially-made connector to CN5/YC-24 Board.

(2) Connect the oscilloscope as follows:
CH-1 : Pin 1 of the special connector
GND : Pin 2 of the special connector
EXT. TRIG : Pin 3 of the special connector

(3) Playback the alignment tape.

Check procedure:

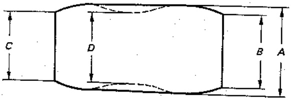
(1) While turning the TRACKING control knob, check that the RF envelope maintains a flat envelope as it increases and decreases.

(2) Check that the RF envelope fluctuation and the head-to-tape contact are within the specification at the center detent position of the TRACKING control knob.

(3) Check that there is not any tape curl at the Tension Regulator, TG-I, TG-II, TG-III and TG-IV.

(4) Put the machine into the PAUSE mode, and check that the RF envelope is not lacking.

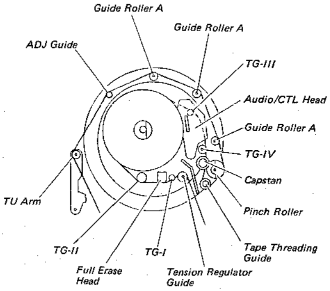
(5) Put the machine into the F.FWD and REW modes, and check the tape curl of each tape guides are within the specification.



Spec.:

• FWD mode
head-to-tape contact
$\frac{C}{A} \geqq 0.8$
$\frac{B}{A} \geqq 0.8$
fluctuation
$\frac{D}{A} \geqq 0.9$

• REV mode
head-to-tape contact
$\frac{C}{A} \geqq 0.6$
$\frac{B}{A} \geqq 0.6$


Guide Roller A
Guide Roller A
ADJ Guide
TG-III
Audio/CTL Head
Guide Roller A
TG-IV
Capstan
Pinch Roller
TU Arm
Tape Threading Guide
TG-II
TG-I
Full Erase Head
Tension Regulator Guide

Adjustment procedure:

- When adjusting the tape guide height, Loosen the set screw of each tape guide, and adjust the height by turning the upper flange or adjusting the screw.
- When the tracking at the drum entrance is not correct,

(1) Turn the TRACKING control knob so that the RF envelope amplitude is 70 to 80 % of the maximum amplitude.

(2) Turn the upper flange of TG-II so that the upper flange does not contact the upper edge of the tape.

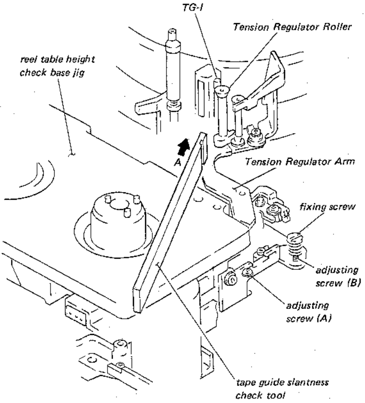
(3) Adjust the height of the Tension Regulator by turning the upper flange to meet the following specifications:

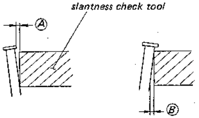
  - The tape runs in contact with the upper flange.
  - The tape runs in contact with the lead of the head drum.
  - The RF envelope waveform is flat.

(4) Adjust the height of TG-I by turning the adjusting screw so that the tape runs in contact with the lower flange of TG-I. Turn the adjusting screw 1/4 turn in the clockwise direction from the above state so that there is clearance between the tape and the lower flange. Tighten the lock screw.

(5) Adjust the height of TG-II by turning the upper flange so that the upper edge of the tape runs in contact with the upper flange.

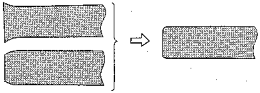
(6) If the specification for the RF envelope fluctuation or the head-to-tape contact at the drum entrance is not met, adjust the slant of the Tension Regulator to be within the range of the specification by turning the adjusting screw, as shown in the figure. Perform the steps (1) to (5) again.


TG-I
Tension Regulator Roller
reel table height check base jig
A
Tension Regulator Arm
fixing screw
adjusting screw (B)
adjusting screw (A)
tape guide slantness check tool


slantness check tool
Ⓐ
Ⓑ

Spec.:
Ⓐ : There is no clearance.
Ⓑ ≦ 0.1 mm

<drum entrance side>



- When the tracking at the drum exit is not correct,

(7) Turn the TRACKING control knob so that the RF envelope amplitude is 70 to 80 % of the maximum amplitude.

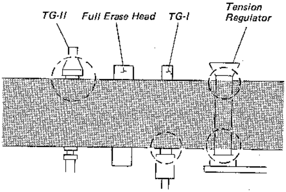
(8) Turn the upper flange of TG-III so that the upper flange does not contact the upper edge of the tape.

(9) Adjust the height of TG-IV by turning the upper flange to meet the following specifications:

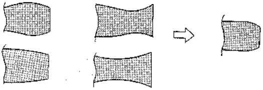
  - The tape runs in contact with the lead of the head drum.
  - The tape runs in contact with the upper flange of TG-IV.
  - The RF envelope waveform is flat.

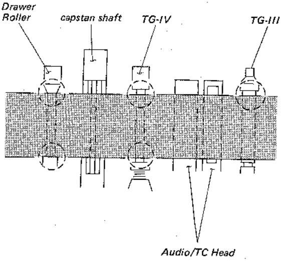
(10) Adjust the height of TG-III by turning the upper flange so that the upper edge of the tape runs in contact with the upper flange.

(11) If the specification of the RF envelope fluctuation or the head-to-tape contact at the drum exit is not met, adjust the slant to be within the range of the specification. (Refer to sec.7-7. Audio/CTL Head Slantness Adjustment.)
Perform Steps (7) to (10) again.


TG-II
Full Erase Head
TG-I
Tension Regulator

<drum exit side>




Drawer Roller
capstan shaft
TG-IV
TG-III
Audio/TC Head

7-7. AUDIO/CTL HEAD ZENITH ADJUSTMENT

Mode: Turn the pulley of the gear box block by hand so that the guide on the Threading Ring is not located in front of the Audio/CTL Head.

Tool: Flatness plate

Check procedure:

(1) Place the flantness plate against the TG-III tape guide, as shown in the figure.

(2) Check that the clearance between the head and the flatness plate meets the required specification, when the flatness plate is set on the flat portion of TG-III and the CTL Head.

Adjustment procedure:

. If there is a clearance at the bottom portion,

(1) Loosen the fixing screw 1/4 to 1/2 turn.

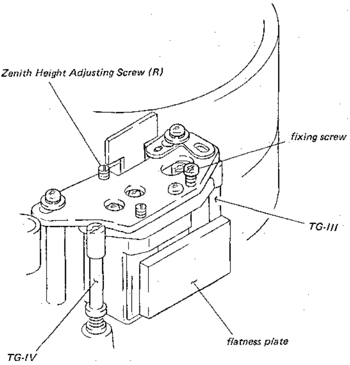
(2) Turn the Zenith Height Adjusting Screw (R) in the clockwise direction and adjust the Zenith.

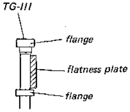
(3) Tighten the fixing screw and check again.

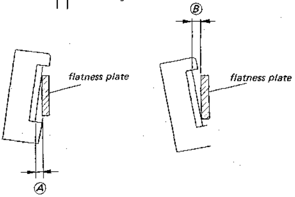
. If the clearance at the top portion is out of the required specification,

(4) Turn the Zenith Height Adjusting Screw (R) in the counterclockwise direction and adjust the Zenith.

(5) Tighten the fixing screw and check again.


Zenith Height Adjusting Screw (R)
fixing screw
TG-III
flatness plate
TG-IV


TG-III
flange
flatness plate
flange


Ⓑ
flatness plate
flatness plate
Ⓐ

Spec.:
Ⓐ : There is no clearance.
Ⓑ ≦ 0.05mm

7-8. AUDIO HEAD HEIGHT ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, RR5-3SA

Dual trace oscilloscope or VTVM

Preparation:

(1) Connect the oscilloscope or VTVM to AUDIO OUT CH-1 and CH-2.

(2) Playback the audio 1 KHz signal portion of the alignment tape.

Check procedure:

(1) While pressing down on the tape at (a), check that the level decreases.

(2) While pushing up on the tape at (b), check that the level decreases.

Adjustment procedure:

. If the level increases while pressing down on the tape at (a),

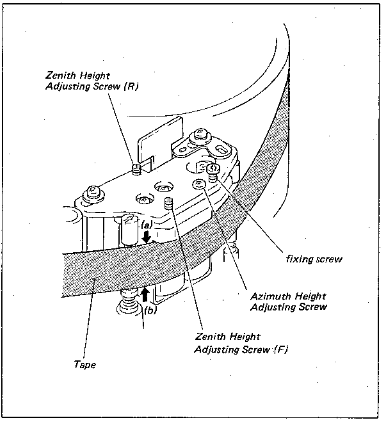
(1) Loosen the fixing screw 2 to 3 turns. Turn the Zenith Height Adjusting Screws (R) and (F) in the counterclockwise direction and turn the Azimuth Height Adjusting Screw an exactly equal amount in the clockwise direction. Adjust for maximum output.

(2) After the adjustment, tighten the fixing screw and check again.

. If the level increases while pushing up on the tape at (b),

(3) Turn the Zenith Height Adjusting Screws (R) and (F) in the clockwise direction and turn the Azimuth Height Adjusting Screw an exactly equal amount in the counterclockwise direction. Adjust for maximum output.

(4) After the adjustment, tighten the fixing screw and check again.


Zenith Height Adjusting Screw (R)
(a)
(b)
fixing screw
Azimuth Height Adjusting Screw
Zenith Height Adjusting Screw (F)
Tape

7-9. AUDIO HEAD PHASE ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, RR5-3SA
Dual trace oscilloscope

Preparation:

(1) Connect the HORIZONTAL and VERTICAL terminals of the oscilloscope to AUDIO OUT CH1 and CH2.

(2) Playback the audio 1 KHz signal portion of the alignment tape.

(3) Adjust the scope for a lissajous waveform with horizontal and vertical amplitudes of 6 cm.

Check procedure:

(1) Check that the vertical amplitude of the signal at X=0 meets the required specification.

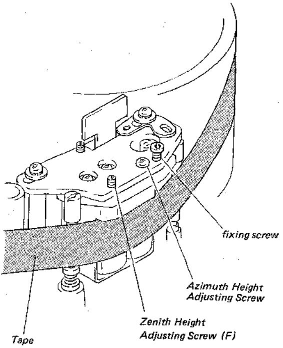
(2) Playback the audio 10 KHz signal portion of the alignment tape, and check that the lissajous waveform meets the required specification.

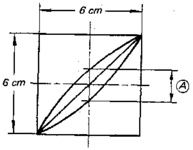
Adjustment procedure:

(1) Loosen the fixing screw about 1/4 to 1/2 turn.

(2) Turn the Azimuth Height Adjusting Screw to meet the required specification.

(3) Tighten the fixing screw, and check the phase again.


fixing screw
Azimuth Height Adjusting Screw
Zenith Height Adjusting Screw (F)
Tape



Spec.:
1 kHz : Ⓐ ≦ 0.7 cm
10 kHz : within 90°

7-10. CTL HEAD POSITION ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, RR5-3SA
Oscilloscope
Eccentric screwdriver (4mm dia.)
Local specially-made connector for the tape path adjustment. (Refer to the alignment information)

Preparation:

(1) Connect the local specially-made connector to CN5/YC-24 Board.

(2) Connect the oscilloscope as follows:
CH-1 : Pin 1 of the special connector
GND : Pin 2 of the special connector
EXT.TRIG : Pin 3 of the special connector

(3) Playback the monoscope signal segment of the alignment tape.

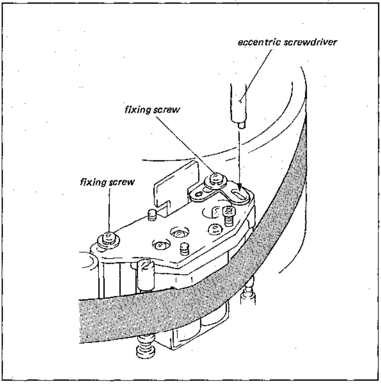
Check procedure:

(1) While turning the TRACKING control knob, check that the RF envelope has the maximum amplitude at the center detect position.

Adujstment procedure:

(1) Loosen the two fixing screws about 1/4 to 1/2 turn.

(2) Insert the eccentric screwdriver into the hole, as shown in the figure. Adjust the CTL head position to meet the required specification.



7-11. SWITCHING POSITION ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, RR5-3SA
Dual trace oscilloscope
Local specially-made connector for the tape path adjustment (Refer to the alignment information)

Preparation:

(1) Short between TP3/SV-57 Board and GND with a short clip lead.

(2) Connect the local specially-made connector to CN-5/YC-24 Board.

(3) Connect the oscilloscope as follows:
CH-1 : Pin 1 of the special connector
CH-2 : Pin 3 of the special connector
GND : Pin 2 of the special connector
EXT.TRIG : Pin 3 of the special connector

(4) Turn the TRACKING control knob to the center detent position.

(5) Playback the color-bar segment of the alignment tape.

Check procedure:

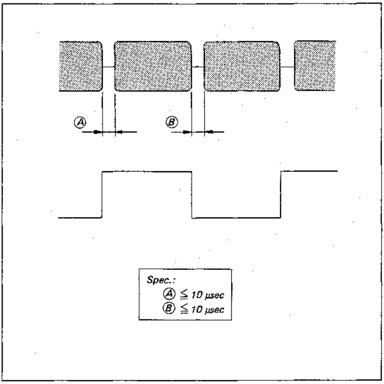
(1) Check that the waveform at the switching pulse portion meets the required specification.

(2) If it meets the required specification, disconnect the short clip lead.

Adjustment procedure:

(1) Adjust RV1 and RV3/SV-57 Board to meet the specification.

(2) After adjustment, disconnect the short clip lead.



Spec.:
Ⓐ ≦ 10 μsec
Ⓑ ≦ 10 μsec

7-12. VIDEO HEAD DIHEDRAL ADJUSTMENT

- This adjustment is performed only for the REC/PB Head.

Mode: Playback the alignment tape

Tool: Alignment, RR5-3SA
Dihedral adjusting screw (four)
Monitor TV

Preparation:

(1) Connect a monitor-TV to the VTR.

(2) Playback the monoscope signal portion of the alignment tape.

Check procedure:

(1) Check that the vertical line of the monoscope signal under the switching pulse is playedback as one line.

(If two lines are visible, adjustment is required.)

Adjustment procedure:

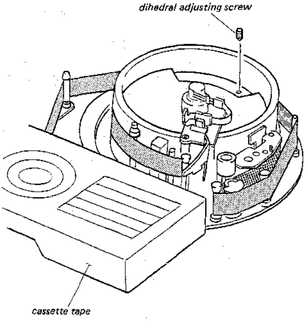
(1) Screw the four dihedral adjusting screws lightly into the upper drum.

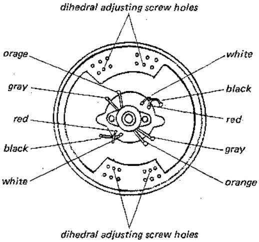
(2) Turn the adjusting screw adjacent to the CH-A head until it feels stiff.

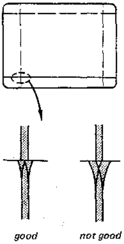
(3) If the screw is forward further, the video head will move, and the dihedral of the video head is adjusted.

(4) Playback the alignment tape. If the distortion of the vertical line has gotten worse, turn this screw back one turn and turn the other screw of the same video head so that the dihedral is corrected.

(5) After the adjustment, remove the dihedral adjusting screws and check again.


dihedral adjusting screw
cassette tape


dihedral adjusting screw holes
orage
gray
red
black
white
white
black
red
gray
orange
dihedral adjusting screw holes


good
not good

SECTION 8
POWER SUPPLY AND SYSTEM CONTROL ALIGNMENT

[Equipment Required]

- DC Voltmeter
- Oscilloscope
- Camera adaptor (CMA-8)
  NOTE: CMA-8 DC Output is 13 Vdc.
- FILTER : Kodak Wratten gelatin filter
  No. 96 N.D. 0.60
  No. 96 N.D. 2.00
  Use the N.D. Filters one over the other.

8-1. REG +10.5 V ADJUSTMENT

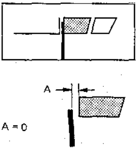
machine conditions for adjustment	spec.	adjustment
• DC IN 12V connector; +12V±0.02V • PLAY mode.	TP6/PS-42 10.52V±0.02 Vdc	⊘ RV3/PS-42

NOTE: If the REG 10.5V adjustment is attempted, re-alignment of the video system and servo system are required.
Do not attempt adjustment to the REG 10.5V power supply unless machine performance is obviously poor due to incorrect power supply voltage. If adjustments are made to the power supply, re-alignment of the video and servo systems are necessary.

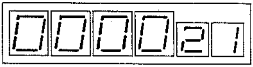
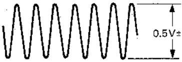
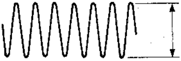
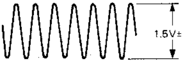
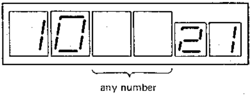
8-2. PB +10.5V ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• DC IN 12V connector; +12V±0.02V • PLAY mode	TP7/PS-42 10.5V±0.02 Vdc	⊘ RV4/PS-42

8-3. BATTERY METER CALIBRATION ADJUSTMENT

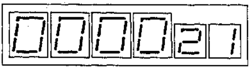
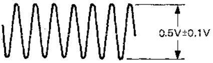
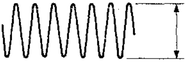
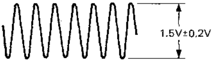
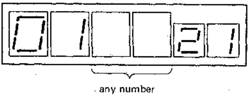
machine conditions for adjustment	spec.	adjustment
• DC IN 12V connector; EXT DC (at TP13; 11.0V±0.02V) • PLAY mode.	BATTERY meter  	⊘ RV6/PS-42

8-4. TAPE BEGINNING SENSOR ADJUSTMENT

machine conditions for adjustment	Spec.	adjustment
• Put the unit into the thread-end mode without inserting a cassette tape. • STOP mode. • SW1/SY-22; ON	counter set TAPE COUNTER 	⊘ RESET button (Control Panel)
• Temporarilly set the RV3/SY-18 board fully CCW. • Insert the filter (black) between DUS-5 and LE-20 board (Tape beginning detector). • PLAY mode.	preset TP3/SY-18 	⊘ RV2/SY-18 TRIG; TP3/SY-18
	tuning TP3/SY-18 Maximize this level 	⊘ LV1/SY-18 TRIG; TP3/SY-18
	beginning sensor adj. TP3/SY-18 	⊘ RV2/SY-18 TRIG; TP3/SV-18
• Remove the filter (black) and insert another filter (grey).	TAPE COUNTER 	
• Remove the filter (grey) and put the unit into the unthread-end mode. • Insert a blank tape. • PLAY mode.	TP3/SY-18 less than 1.0 Vp-p	

NOTE: After completing this adjustment, adjust the Sec. 8-5. TAPE END SENSOR ADJ.

8-5. TAPE END SENSOR ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
• Put the unit into the thread-end mode without inserting a cassette tape. • STOP mode. • SW1/SY-22; ON	counter set TAPE COUNTER 	⊘ RESET button (Control Panel)
• Insert the filter (black) between DUS-5 and LE-21 board (Tape end detector). • STOP mode.	preset TP4/SY-18 	⊘ RV3/SY-18 TRIG; TP4/SY-18
	tuning TP4/SY-18 Maximize this level 	⊘ LV2/SY-18 TRIG; TP4/SY-18
	end sensor adj. TP4/SY-18 	⊘ RV3/SY-18 TRIG; TP4/SY-18
• Remove the filter (black) and insert another filter (grey).	TAPE COUNTER 	
• Remove the filter (grey) and put the unit into the unthread-end mode. • Insert a blank tape. • PLAY mode.	TP4/SY-18 less than 1.0 Vp-p	

8-6. BATTERY END LEVEL DETECTOR ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
● DC IN 12V connector; EXT DC ● Connect the CAMERA. ● Short TP37—E4/VO-11. ● REC mode.	TP13/PS-42 11.43V±0.01Vdc	
	⇩ TP5/SY-18 Adjust RV1/SY-18 so that the level changes from Low level to High level.	⊘ RV1/SY-18

8-7. CHARACTER SIZE ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
● CAMERA *connector;* Connect the Video Camera. ● REC mode. ● Press the Return Video button on the Camera.	TP4/SY-22 3.54MHz±0.04MHz	⊘ RV1/SY-22

8-8. PINCH OFF DELAY ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
● Any mode.	Set to the Mechanical center	⊘ RV2/SY-22

SECTION 9
SERVO SYSTEM ALIGNMENT

[Equipment Required]

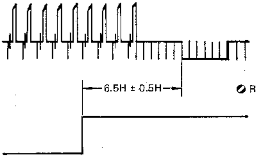
- Dual Trace Oscilloscope.
- Frequency Counter.
- Alignment Tape; RR5-3SA (Part No.: 8-960-015-04).

RR5-3SA

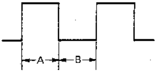
Real Time Counter (min.)	Tape Counter	Video Track	Audio Track
00:00 – 04:00	000 – 100	Monoscope	3 KHz, 0 dB
04:00 – 09:00	100 – 208	Color-bar	———
09:00 – 14:00	208 – 300	R-F sweep	———
14:00 – 16:00	300 – 335	Mod. 20T pulse	1 KHz, 0 dB
16:00 – 18:00	335 – 367	M.S. w/burst	10 KHz, –10 dB
18:00 – 20:00	367 – 398	Pseudo C.B. for DOC adj.	———

- Blank Tape; KCS-20 (SONY standard product)

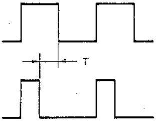
9-1. DRUM LOCK PHASE ADJUSTMENT

machine conditions for adjustment	**spec. & adjustment**
• VIDEO IN connector; Video signal. • Short TP2 – E1/SV-57. • REC mode. • Oscilloscope: CHOP mode.	TP4/VO-11  ⊘ RV2/SV-57 TP6/SV-57 TRIG; TP15/SV-57

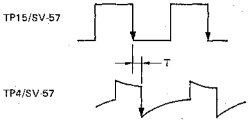
9-2. CAPSTAN FREE SPEED ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
• Playing back the color bar segment of Alignment tape.	TP12/SV-57  A = B	⊘ RV11/SV-57 TRIG; TP12/SV-57

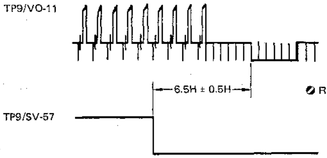
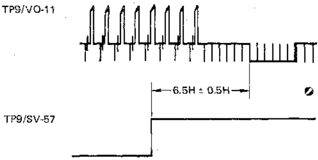
9-3. TRACKING MULTI ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
• Playing back the color bar segment of Alignment tape. • Set the TRACKING control to its center detent. • Oscilloscope; CHOP mode	TP15/SV-57  TP4/SV-57 $T = 0 \pm 50\,\mu$sec	⊘ RV5/SV-57 TRIG; TP15/SV-57

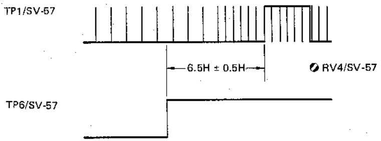
9-4. CAPSTAN FAST LOCK PHASE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP14 – E1/SV-57. • Playing back the color bar segment of Alignment tape. • Oscilloscope; CHOP mode. • Set the TRACKING control to its center detent.	 TP15/SV-57 T TP4/SV-57 T = 0.3 ± 0.05 ms (center of jitter)	⊘ RV12/SV-57 TRIG; TP15/SV-57

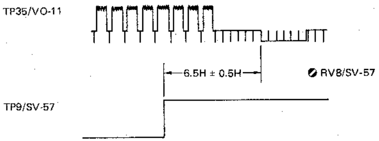
9-5. SWITCHING POSITION ADJUSTMENT

machine conditions for adjustment	spec. & adjustment
• Short TP3 – E1/SV-57. • Playing back the color bar segment of Alignment tape. • Oscilloscope; CHOP mode.	Switching Position –A adj  TP9/VO-11 6.5H ± 0.5H TP9/SV-57 ⊘ RV3/SV-57 TRIG; TP15/SV-57
	Switching Position –B adj  TP9/VO-11 6.5H ± 0.5H TP9/SV-57 ⊘ RV1/SV-57 TRIG; TP15/SV-57

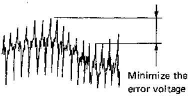
9-6. ϕ^2 PHASE ADJUSTMENT

machine conditions for adjustment	spec. & adjustment
• VIDEO IN connector; Video signal. • REC mode. • Oscilloscope; CHOP mode.	 TP1/SV-57 6.5H ± 0.5H ⊘ RV4/SV-57 TP6/SV-57 TRIG; TP15/SV-57

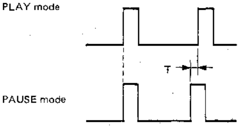
9-7. CONFI SWITCHING POSITION ADJUSTMENT

machine conditions for adjustment	spec. & adjustment
• VIDEO IN connector; Video signal. • REC mode. • Oscilloscope; CHOP mode.	 TP35/VO-11 6.5H ± 0.5H ⊘ RV8/SV-57 TP9/SV-57 TRIG; TP15/SV-57

9-8. PICTURE SPLITTING COMPENSATOR ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
• Playing back the Alignment tape.	R106/SV-57 	Phase adj. ⊘ RV6/SV-57 Level adj. ⊘ RV7/SV-57 TRIG; TP15/SV-57

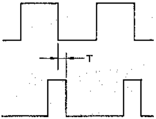
9-9. DRUM AFC BIAS ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
• PLAY mode. • PAUSE mode. • Short TP6 – E1/SY-22. • Connect between TP7 and TP18/SV-57 by 100Ω resistor.	TP3/SV-57  T = 0 ± 0.1 μsec	⊘ RV10/SV-57 TRIG; TP3/SV-57

9-10. DRUM AFC TRANSIENT ADJUSTMENT

machine conditions for adjustment	**spec.**	**adjustment**
• PLAY mode. • PAUSE mode. • Connect between TP7 and TP18/SV-57 by 100Ω resistor. • Short TP6 – E1/SY-22.	TP11/SV-57 DC level in PAUSE mode = REF ↓	
• Disconnect the shorting clip between TP7 and TP18/SV-57. • PLAY mode.	TP11/SV-57 DC level in PLAY mode = (REF) ± 0.05 V	⊘ RV9/SV-57

9-11. REC TRACKING ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Video signal. • Playing back the Alignment tape. • Push the REC button in PLAY mode.* • Oscilloscope; CHOP mode.	TP15/SV-57 TP4/SV-57  T = 200 ± 50 μsec	⊘ RV13/SV-57 TRIG; TP15/SV-57

NOTE: Attach the red cap (miss record) to the button of the Alignment tape.
Don't push at the same time the both button REC and FWD.

SECTION 10
AUDIO SYSTEM ALIGNMENT

[Equipment Required]

- Dual Trace Oscilloscope.
- Frequency Counter
- Alignment Tape; RR5-3SA (Part No.: 8-960-015-04).

RR5-3SA

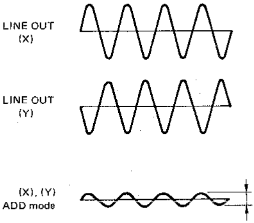
Real Time Counter (min.)	Tape Counter	Video Track	Audio Track
00:00 – 04:00	000 – 100	Monoscope	3 KHz, 0 dB
04:00 – 09:00	100 – 208	Color-bar	———
09:00 – 14:00	208 – 300	R-F sweep	———
14:00 – 16:00	300 – 335	Mod. 20T pulse	1 KHz, 0 dB
16:00 – 18:00	335 – 367	M.S. w/burst	10 KHz, –10 dB
18:00 – 20:00	367 – 398	Pseudo C.B. for DOC adj.	———

- Blank Tape; KCS-20 (SONY standard product)
- Audio Oscillator
- VTVM

10-1. AUDIO OUTPUT FREQUENCY RESPONSE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Temporarilly set the RV201/AU-49 board to fully CW. • Playing back the audio 1 kHz, 3 kHz and 10 kHz segments of Alignment tape. • Set the LV103, LV203/AU-49 to its mechanical center.	LINE OUT connector (terminated by 600 ohm) 1 kHz Level = Ref. Level 3 kHz Level = (Ref. Level) −2.0 dB ±0.5 dB 10 kHz Level = (Ref. Level) −16.5 dB ±0.5 dB	3 kHz adj. ⊘ RV102/AU-49 (CH-1) ⊘ RV202/AU-49 (CH-2) 10 kHz adj. ⊘ RV103/AU-49 (CH-1) ⊘ RV203/AU-49 (CH-2)

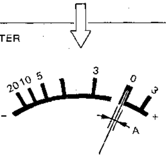
10-2. AUDIO OUTPUT BALANCE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• LINE IN connector; 1 kHz, +4 dB • EE mode. • Oscilloscope → ADD mode.	LINE OUT (X) connector +4.0 dBm	⊘ AUDIO LEVEL VR CH-1/CH-2 (Front panel)
	 Minimize this level.	⊘ RV108/AU-49 (CH-1) ⊘ RV208/AU-49 (CH-2)

10-3. PB OUTPUT LEVEL ADJUSTMENT

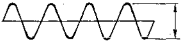
machine conditions for adjustment	spec.	adjustment
• Playing back the audio 1 kHz segment of Alignment tape.	LINE OUT connector (Terminated by 600 ohm) +4.0 dBm ±0.5 dBm	⊘ RV104/AU-49 (CH-1) ⊘ RV204/AU-49 (CH-2)

10-4. AUDIO LEVEL CONTROL SETTING/METER ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• MIC IN connector; 1kHz, –60 dB • EE mode. • METER SELECT sw; CH-1	LINE OUT connector (terminated by 600 ohm) +4.0 dB ± 0.2 dB	⊘ AUDIO LEVEL VR CH-1/CH-2 (Front panel)
	AUDIO METER  Pointer stays in center of A.	⊘ RV302/AU-49 (CH-1) ⊘ RV303/AU-49 (CH-2)

NOTE: The AUDIO LEVEL control should not be touch until rest of Sec. 10 Audio System Alignment are completed.

10-5. SAME PHASE ELIMINATE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• LINE IN connector; 1kHz, +4dB (same phase) • MIC/LINE SELECT sw; LINE • EE mode	TP1/CM-19; CH-1 TP51/CM-19; CH-2  Minimize this level.	⊘ RV1/CM-19 (CH-1) ⊘ RV51/CM-19 (CH-2)

10-6. LIMITER LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• MIC IN connector; 1kHz, −30dB • EE mode.	LINE OUT connector (terminated by 600 ohm) +12 dBm ±0.5 dBm	⊘ RV105/AU-49 (CH-1) ⊘ RV205/AU-49 (CH-2)

10-7. DUB ERASE OSCILLATOR FREQUENCY ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP37 — E6/VO-11. • REC mode and DUB mode.	TP301/AU-51 71 kHz ± 3 kHz	⊘ LV301/AU-51

10-8. BIAS/ERASE OSCILLATOR LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP37 — E3/VO-11. • Set the LV204, RV207/AU-49 to its mechanical center. • REC mode.	TP302/AU-51 FREQUENCY; 71 kHz $^{+3}_{-6}$ kHz LEVEL; 200 —290 mVrms	⊘ SL1, 2, 3/AU-51

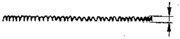
10-9. REC FREQUENCY RESPONSE ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP37 – E6/VO-11. Short TP304 – E301/AU-51. • MIC IN connector; 1 kHz, –70 dB /10 kHz, –70 dB • REC mode.	TP102/AU-49 (CH-1) TP202/AU-49 (CH-2) 1 kHz, –70 dB = Ref. Level 10 kHz, –70 dB = (Ref. Level) +6.0 dB ± 2.0 dB	⊘ LV102, RV107/AU-49 (CH-1) ⊘ LV204, RV207/AU-49 (CH-2)

10-10. BIAS CURRENT ADJUSTMENT

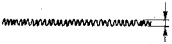
machine conditions for adjustment	spec.	adjustment
• MIC IN connectors; 1 kHz, –60 dB • Short TP37 – E3/VO-11. • REC mode. • Temporarilly set the LV202, RV201/AU-49 to fully CW.	TP102/AU-49 (CH-1) TP202/AU-49 (CH-2) 9.0 mV ± 0.5 mV	⊘ RV101/AU-51 (CH-1) ⊘ RV201/AU-51 (CH-2)

10-11. BIAS TRAP ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP6 – E1/SY-22. • Short TP37 – E6/VO-11. • Input connector; No signal. • REC mode.	TP101/AU-49 (CH-1) TP201/AU-49 (CH-2)  Minimize the BIAS leak.	⊘ LV101/AU-49 (CH-1) ⊘ LV201/AU-49 (CH-2)

NOTE: After completing this adjustment, check that the specification of the Sec. 10-10 is satisfied.

10-12. DUB BIAS TRAP ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP6 – E1/SY-22. • Short TP37 – E6/VO-11. • Input connector; No signal. • DUB mode.	TP203/AU-49  Minimize the BIAS leak. (Max –10 dB)	⊘ LV202/AU-49

10-13. AUDIO REC LEVEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP37 – E3/VO-11. • MIC IN connectors; 1 kHz, –60 dB • Playing back the self-recorded tape.	LINE OUT connector (terminated by 600 ohm) The self record/playback level should be +4.0 dB ±1 dB. (The level difference between CH-1 and CH-2 should be less than 1.0 dB) If the specification is not satisfied, make the following adjustments with reference to the difference from the specified level.	
• Short TP301 – GND/AU-51. • REC mode.	CH-1; TP101/AU-49 CH-2; TP201/AU-49 When the level is higher than that of the specified level, lower the level by the difference from the specified level. When the level is lower than that of the specified level, raise the level by the difference from the specified level. After adjustments are completed, check the level at LINE OUT connector and repeat adjustment until the specification is satisfied.	⊘ RV106/AU-49 (CH-1) ⊘ RV206/AU-49 (CH-2)

10-14. CROSS-TALK CANCEL ADJUSTMENT

machine conditions for adjustment	spec.	adjustment
• Short TP37 – E3/VO-11. • Short TP6 – E1/SY-22. • Short TP301 – E301/AU-51. • CH-1 MIC IN connector; 5 kHz, –60 dB • DUB mode.	CH-2 LINE OUT Minimize the output level. (Less than – 11 dB)	⊘ RV201/AU-49

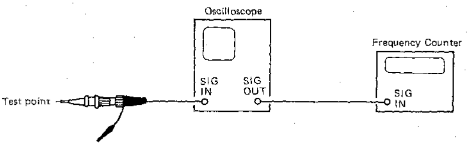
SECTION 11
VIDEO SYSTEM ALIGNMENT

[Equipment Required]

- Dual Trace Oscilloscope.
- Frequency Counter.
- Video Sweep Generator (with Burst)
- Blank Tape; KCS-20 (SONY standard product)
- Aligament Tape; RR5-3SA (Part No.: 8-960-015-04).

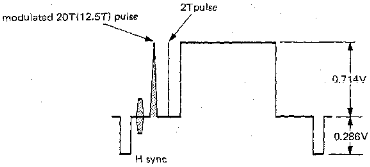
RR5-3SA

Real Time Counter (min.)	Tape Counter	Video Track	Audio Track
00:00 – 04:00	000 – 100	Monoscope	3 KHz, 0 dB
04:00 – 09:00	100 – 208	Color-bar	———
09:00 – 14:00	208 – 300	R-F sweep	———
14:00 – 16:00	300 – 335	Mod. 20T pulse	1 KHz, 0 dB
16:00 – 18:00	335 – 367	M.S. w/burst	10 KHz, −10 dB
18:00 – 20:00	367 – 398	Pseudo C.B. for DOC adj.	———

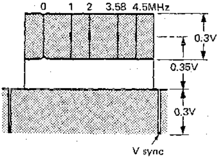

Oscilloscope
Frequency Counter
SIG IN
SIG OUT
SIG IN
Test point

[Video Signals Required]

- Color Bar Signal; 75 % color bar signal.
- NTSC Color Video Signal; Any video signal that has the NTSC specified subcarrier and sync signals.
- Sin² wave signal;

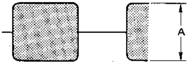
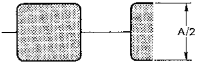
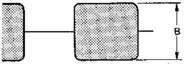
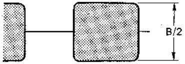

modulated 20T(12.5T) pulse
2Tpulse
0.714V
0.286V
H sync

- Gated Sweep Signal;

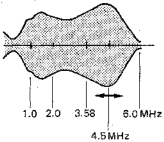

0
1
2
3.58
4.5MHz
0.3V
0.35V
0.3V
V sync

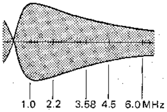
11-1. PLAYBACK RF AMPLIFIER ADJUSTMENT

11-1-1. PB RF Frequency Response Adjustment (High)

machine conditions for adjustment	spec.	adjustment
• Short TP3 – E1/SV-57. • Playing back the color bar segment of Alignment tape. • Set the TRACKING control to its center detent. • Temporarilly set the RV5/RP-16 to fully counter-CW, and set the RV7/RP-16 to fully CW.	CH-A adj. TP1/RP-16  A = Maximize the level	⊘ RV6/RP-16 TRIG; TP39/VO-11
	TP1/RP-16 	⊘ RV5/RP-16 TRIG; TP39/VO-11
• Short TP3 – E1/SV-57. • Playing back the color bar segment of Alignment tape. • Set the TRACKING control to its center detent.	CH-B adj. TP2/RP-16  B = Maximize the level	⊘ RV8/RP-16 TRIG; TP39/VO-11
	TP2/RP-16 	⊘ RV7/RP-16 TRIG; TP39/VO-11

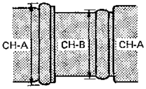
11-1-2. PB RF Frequency Response Adjustment.

<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr><td rowspan="2">
- Short TP3 – E1/SV-57.
- Playing back the RF SWEEP segment to Alignment tape.
- Set the TRACKING control to its center detent.
</td><td>
4.5 MHz Tuning adj.
Temporarilly set the RV3 and RV4/YC-24 to fully CW.
TP8/YC-24


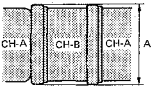
Waveform peak = 4.5 MHz
</td><td>
CH-A adj.
⊘ LV2/YC-24
CH-B adj.
⊘ LV1/YC-24
TRIG; TP1/VO-11
</td></tr>
<tr><td>
Frequency Response adj.
TP8/YC-24


<table>
<tr><th>2.2 MHz</th><th>3.58 MHz</th><th>4.5 MHz</th><th>5.4 MHz</th><th>6.0 MHz</th></tr>
<tr><td>100 %
REF</td><td>77 %
±5 %</td><td>67 %
±10 %</td><td>54 %
±10 %</td><td>50 %
±10 %</td></tr>
</table>
Adjust both the CH-A and CH-B waveforms meet the required specifications.
</td><td>
CH-A adj.
⊘ RV4/YC-24
⊘ RV5/RP-16
CH-B adj.
⊘ RV3/YC-24
⊘ RV7/RP-16
TRIG; TP1/VO-11
</td></tr>
</table>

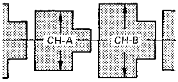
11-1-3. PB Y RF Output Balance Adjustment

machine conditions for adjustment	spec.	adjustment
- Playing back the color bar segment of Alignment tape. - Set the TRACKING control to its center detent.	TP3/YC-24  The level difference between CH-A and CH-B should be less than 0.01 Vp-p.	⊘ RV5/YC-24 TRIG; TP1/VO-11

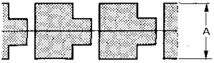
11-1-4. PB Y RF Output Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape. • Set the TRACKING control to its center detent.	TP3/YC-24  A = 0.24 V ± 0.01 Vp-p	⊘ RV2/YC-24 TRIG; TP1/VO-11

11-1-5. PB Chroma RF Output Balance Adjustment

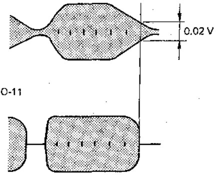
machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape. • Set the TRACKING control to its center detent.	TP14/VO-11  The level difference between CH-A and CH-B should be less than 0.01 Vp-p.	⊘ RV6/YC-24 TRIG; TP1/VO-11

11-1-6. PB Chroma RF Output Level Adjustment

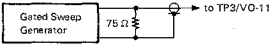
machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape. • Set the TRACKING control to its center detent.	TP14/VO-11  A = 40^{+3}_{-2} mVp-p	⊘ RV11/VO-11 TRIG; TP1/VO-11

11-2. Y/CHROMA DEMODULATOR ADJUSTMENT

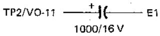
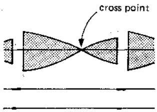
11-2-1. Drop-Out Compensator Sensitivity Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Short TP3 – E1/SV-57. • Short TP13 – E3/VO-11. • Playing back the RF SWEEP segment of Alignment tape. • Oscilloscope; CHOP mode.	TP3/YC-24  TP12/VO-11	⊘ RV9/VO-11 TRIG; TP1/VO-11

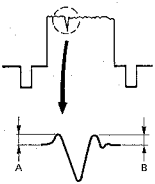
11-2-2. Noise Canceller Adjustment


Gated Sweep Generator
75 Ω
to TP3/VO-11

23 dB ATT

machine conditions for adjustment	spec.	adjustment
• Short TP14 – E5/VO-11 • Connect between TP2/VO-11 and E1 with capacitor.  TP2/VO-11 + E1 1000/16 V • Playing back the color bar segment of Alignment tape.	TP4/VO-11  cross point Minimize the amplitude of cross point (cross point; 3.5 MHz ± 0.5 MHz)	⊘ RV2/VO-11 TRIG; TP4/VO-11

11-2-3. PB Y Phase Equalizing Adjustment

machine conditions for adjustment	spec.	adjustment
• Short TP14 – E5/VO-11. • Playing back the color Monoscope segment of Alignment tape.	TP4/VO-11  Equalize the A Level and B Level	⊘ RV8/VO-11 TRIG; TP23/VO-11

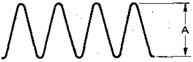
11-2-4. 3.58 MHz Reference Oscillator Frequency Adjustment

machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape.	TP25/VO-11 3.579545 MHz ± 5 Hz	⊘ CV2/VO-11

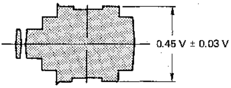
11-2-5. VCO Frequency Adjustment

machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape.	TP24/VO-11 7.5V ± 0.1V dc	⊘ RV15/VO-11

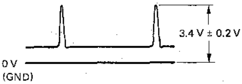
11-2-6. 4.27 MHz Tuning Adjustment

machine conditions for adjustment	**spec.**	**adjustment**
• VIDEO IN connector; Color bar signal • EE mode.	TP26/VO-11  A = 0.3 V ± 0.05 V	⊘ T1, LV2/VO-11 TRIG; TP26/VO-11

11-2-7. PB ACC Level Adjustment

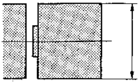
machine conditions for adjustment	**spec.**	**adjustment**
• VIDEO IN connector; Color bar signal. • EE mode.	TP21/VO-11 	⊘ RV12/VO-11 TRIG; TP22/VO-11

11-2-8. PB APC Gain Adjustment

machine conditions for adjustment	**spec.**	**adjustment**
• Short TP36 — E1/VO-11. • Playing back the color bar segment of Alignment tape.	TP20/VO-11 	⊘ RV14/VO-11 TRIG; TP20/VO-11

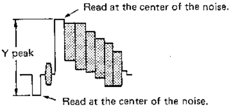
NOTE: After completing this adjustment, adjustment the section 11-2-7.

11-2-9. Burst Tuning Adjustment

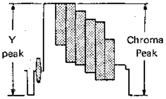
machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • EE mode.	TP21/VO-11  Minimize the chroma amplitude	⊘ T2/VO-11 TRIG; TP1/VO-11

NOTE: After completing adjustment, readjustment the section 11-2-7.

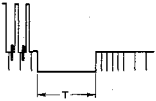
11-2-10. Y Output Level Adjustment

machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal • Playing back the Self recorded tape.	VIDEO OUT connector (terminated by 75Ω) (TP4/VO-11)  Read at the center of the noise. Y peak Read at the center of the noise. Y peak = 1.0 V ± 0.02 V	⊘ RV3/VO-11 TRIG; TP1/VO-11

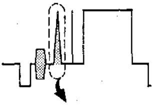
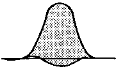
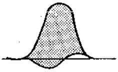
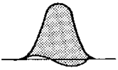
11-2-11. Chroma Mix Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape.	VIDEO OUT connector (terminated by 75Ω) (TP4/VO-11)  Y peak Chroma Peak Chroma Peak = (Y Peak) ± 0.02 V	⊘ RV13/VO-11 TRIG; TP1/VO-11

11-2-12. False VD Pulse Width Adjustment

machine conditions for adjustment	spec.	adjustment
• Playing back the color bar segment of Alignment tape. • PAUSE mode.	TP4/VO-11  T = 315 μs ± 10 μs	⊘ RV4/VO-11 TRIG; TP1/VO-11

11-2-13. PB Y/C Delay Adjustment

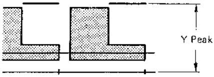
machine conditions for adjustment	spec. & adjustment
• Playing back the MOD. 20T pulse segment of Alignment tape.	TP4/VO-11  ① Y and Chroma signals are in phase.  ② Chroma signal is advanced.  ③ Chroma signal is delayed.  ⊘ DL3/VO-11 TRIG; TP23/VO-11 • Select the suitable tap according to short any taps of DL3/VO-11 board so that the waveform meets the fig ①. • Each one tap is 0.1 μsec delayed.

11-3. Y/CHROMA MODULATOR ADJUSTMENT

11-3-1. Sync Tip Carrier Frequency Adjustment

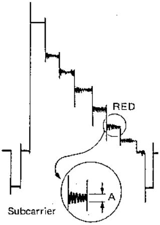
machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; no signal input. • Short IC10-15pin — IC10-3 pin /VO-11. • EE mode.	TP38/VO-11 3.8 MHz ± 0.05 MHz	⊘ RV6/VO-11

11-3-2. FM Deviation Adjustment

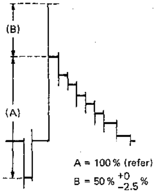
machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • Temporarilly set the RV7/VO-11 to fully CW. • EE mode.	VIDEO OUT connector (terminated by 75Ω) (TP4/VO-11)  Y Peak = 1.02 V ± 0.05 V	⊘ RV5/VO-11 TRIG; TP1/VO-11

NOTE: After completing adjustment, adjustment the section 11-3-4. White clip adjustment.

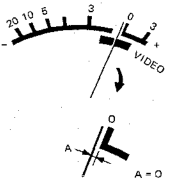
11-3-3. Sub Carrier Trap Adjustment

machine conditions to adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • EE mode.	TP10/VO-11  A = less than 50 mV	⊘ LV11/VO-11 TRIG; TP23/VO-11

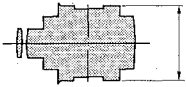
11-3-4. White Clip Adjustment

machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • EE mode.	TP10/VO-11  A = 100 % (refer) B = 50 % $^{+0}_{-2.5}$ %	⊘ RV7/VO-11 TRIG; TP23/VO-11

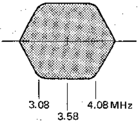
11-3-5. Video Meter Calibration Adjustment

machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • METER SELECT sw; VIDEO. • EE mode.	CH-1/VIDEO meter  A = 0	⊘ RV1/VO-11

11-3-6. Y/C Separate Adjustment

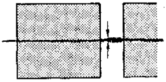
machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • EE mode.	TP16/VO-11  Maximize the chroma amplitude.	⊘ RV16/VO-11 TRIG; TP1/VO-11

11-3-7. REC Chroma Frequency Response Adjustment

<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr>
<td>• VIDEO IN connector; Gated sweep with burst.
• EE mode.</td>
<td>TP17/VO-11


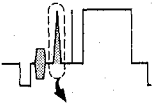
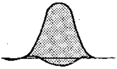
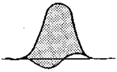
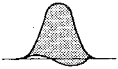
<table>
<tr><th>3.58 MHz</th><th>3.08 MHz</th><th>4.08 MHz</th></tr>
<tr><td>100%
REF</td><td>90%
$^{+10}_{-5}$%</td><td>90%
$^{+10}_{-5}$%</td></tr>
</table>
</td>
<td>⊘ T10/VO-11
TRIG; TP1/VO-11</td>
</tr>
</table>

11-3-8. Frequency Converter Balance Adjustment

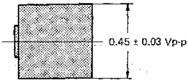
<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr>
<td>• VIDEO IN connector; Color bar signal.
• EE mode.</td>
<td>TP19/VO-11

Minimize the carrier leak
(Less than 100 mVp-p)</td>
<td>⊘ RV10/VO-11
TRIG; TP1/VO-11</td>
</tr>
</table>

11-3-9. REC Y/C Delay Adjustment

Perform adjustment of section 11-2-13 before this adjustment.

machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Sin^2 wave signal. • Playing back the self recorded tape.	TP4/VO-11  ① Y and Chroma signal are in phase.  ② Chroma signal is advanced.  ③ Chroma signal is delayed.  ⊘ DL1/VO-11 • Select the suitable tap according to short any taps of DL1/VO-11 board so that the waveform meets the fig ①. • Each one tap is 0.1 μsec. delayed.	TRIG; TP4/VO-11

11-3-10. REC ACC Level Adjustment

machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • EE mode.	TP21/VO-11 	⊘ RV12/VO-11 TRIG; TP1/VO-11

11-4. RECORD AMPLIFIER ADJUSTMENT

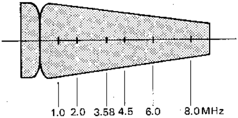
11-4-1. Y REC Current Frequency Response Adjustment

machine conditions for adjustment

- VIDEO IN connector; Color bar signal.
- Short TP7 – E1/RP-16 and TP16 – E10/VO-11.
- Set the RV1/RP-16 to its mechanical center.
- Unsolder temporarily between TP3 and TP4/RP-16 (CH-A).
- Unsolder temporarily between TP5 and TP6/RP-16 (CH-B).
- Connect the SWEEP signal to between TP8 and E1/RP-16.
- REC mode.

spec. & adjustment

between TP3 (+) and TP4 (GND)/RP-16; CH-A
between TP5 (+) and TP6 (GND)/RP-16; CH-B



1.0 MHz	3.58 MHz	4.5 MHz	6.0 MHz	8.0 MHz
100 % REF	79 % ±5 %	71 % ±6 %	59 % ±4 %	46 % ±6 %

⊘ RV3/RP-16 (CH-A)
⊘ RV4/RP-16 (CH-B)

TRIG; TP1/VO-11

Ajust both the CH-A and CH-B waveforms meet the required specifications.

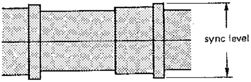
11-4-2. Y REC Current Level Adjustment

machine conditions for adjustment

- VIDEO IN connector; Color bar signal
- Short TP16 – E10/VO-11.
- Unsolder temporaly between TP3 and TP4/RP-16 (CH-A).
- Unsolder temporaly between TP5 and TP6/RP-16 (CH-B).
- REC mode.

spec. & adjustment

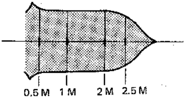
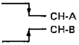
between TP3 (+) and TP4 (GND)/RP-16; CH-A
between TP5 (+) and TP6 (GND)/RP-16; CH-B



sync level = R x (64 mA ± 5 mA)
= 320 mV ± 25 mV
⊘ RV1/RP-16

TRIG; TP1/VO-11

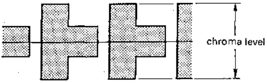
11-4-3. Y OA Frequency Response Adjustment

<table>
<tr><th>machine conditions for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr>
<td>• VIDEO IN connector; Gated sweep signal with burst.
• VIDEO OUT connector; terminated by 75Ω.
• Short TP14 — E5/VO-11.
• Playing back the self-recorded tape.</td>
<td>TP4/VO-11

<table>
<tr><th>frequency</th><th>level</th></tr>
<tr><td>0.5 MHz</td><td>100% ref.</td></tr>
<tr><td>2.5 MHz</td><td>100 ±10%</td></tr>
<tr><td>3.0 MHz</td><td>50 ±10%</td></tr>
</table>
Confirm both CH-A and CH-B waveforms meet the above specifications.</td>
<td>TRIG; TP1/VO-11

 </td>
</tr>
</table>

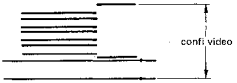
If the specifications are not satisfied, perform the sections 11-4-1, Y REC Current Frequency Response Adjustment and 11-4-2, Y REC Current Level Adjustment.

After the readjustments, confirm again the waveforms at TP4/VO-11 following the procedures in the section 11-4-3. Y OA Frequency Response Adjustment.

11-4-4. Chroma REC Current Level Adjustment

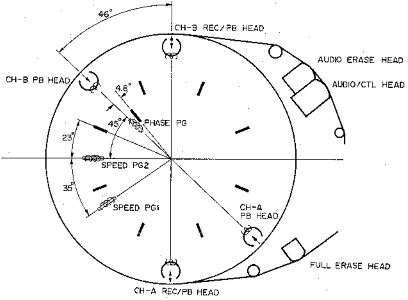
machine conditions for adjustment	spec. & adjustment
• VIDEO IN connector; Color bar signal. • Playing back the self recorded tape.	TP14/VO-11  Chroma level = 42^{+3}_{-2} mV ⊘ RV2/RP-16 TRIG; TP1/VO-11

11-5. CONFIDENCE VIDEO LEVEL ADJUSTMENT

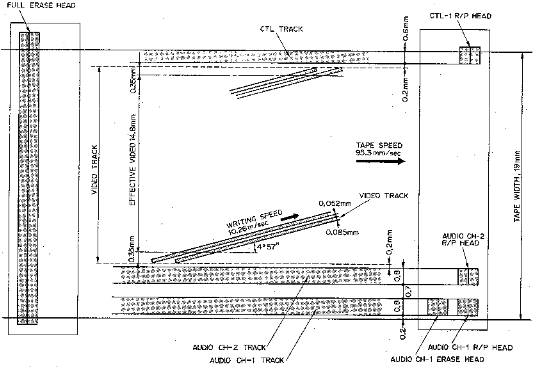
machine conditions for adjustment	spec.	adjustment
• VIDEO IN connector; Color bar signal. • REC mode.	TP35/VO-11  confi video = 2.0 V ± 0.1 V	⊘ RV17/VO-11 TRIG; TP1/VO-11

SECTION 12
BLOCK DIAGRAM

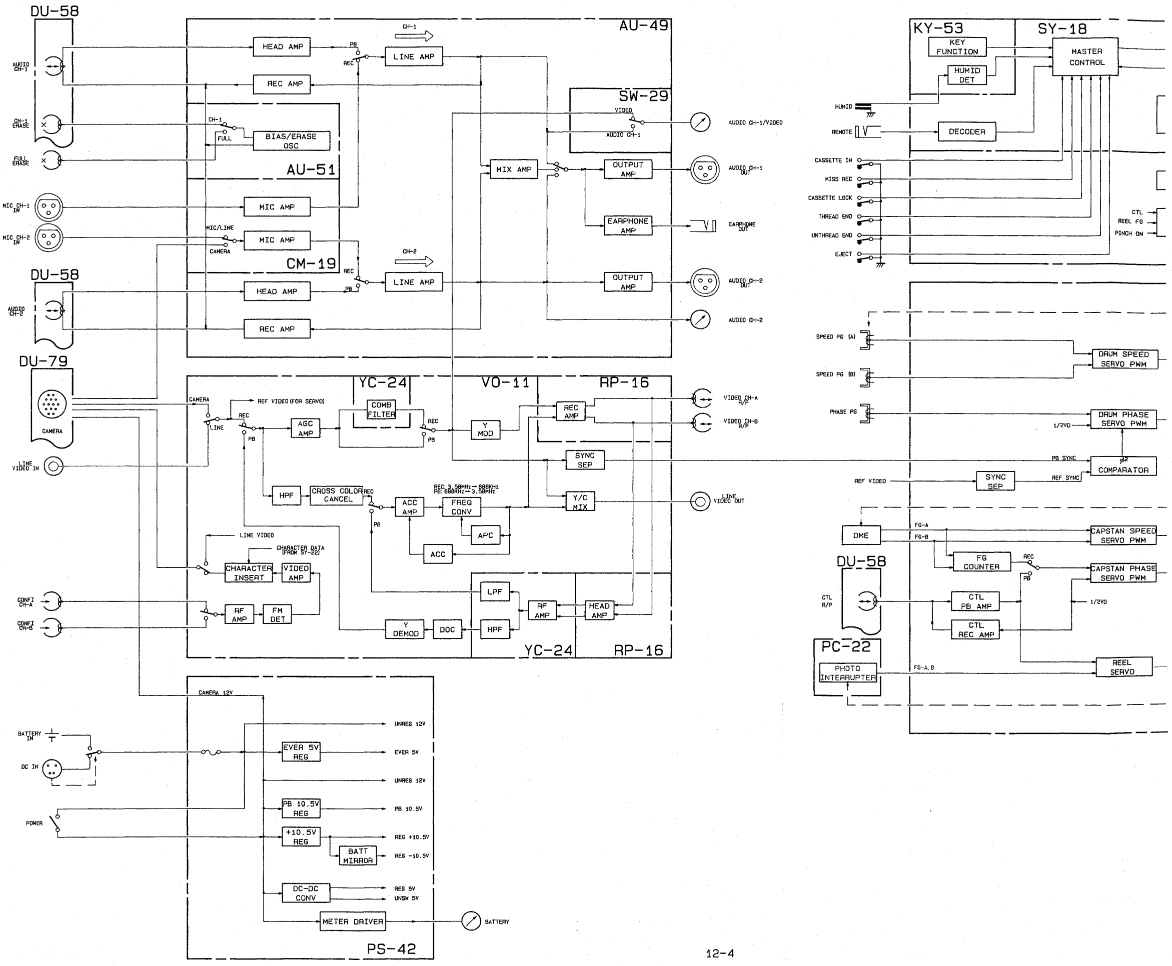
HEAD LOCATION

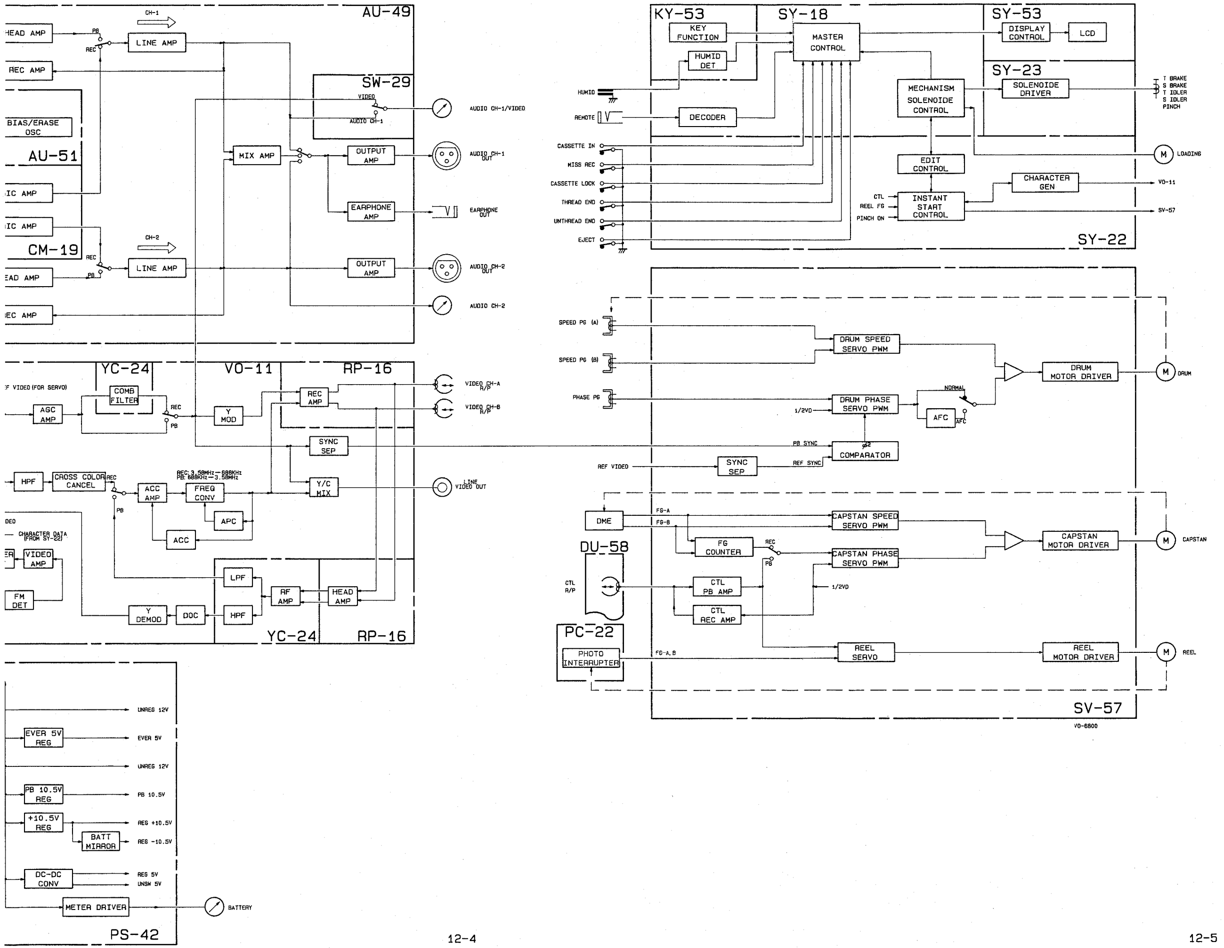

46°
CH-B REC/PB HEAD
AUDIO ERASE HEAD
AUDIO/CTL HEAD
CH-B PB HEAD
4.8°
45°
PHASE PG
23°
SPEED PG2
35°
SPEED PG1
CH-A
PB HEAD
FULL ERASE HEAD
CH-A REC/PB HEAD

TAPE PATTERN

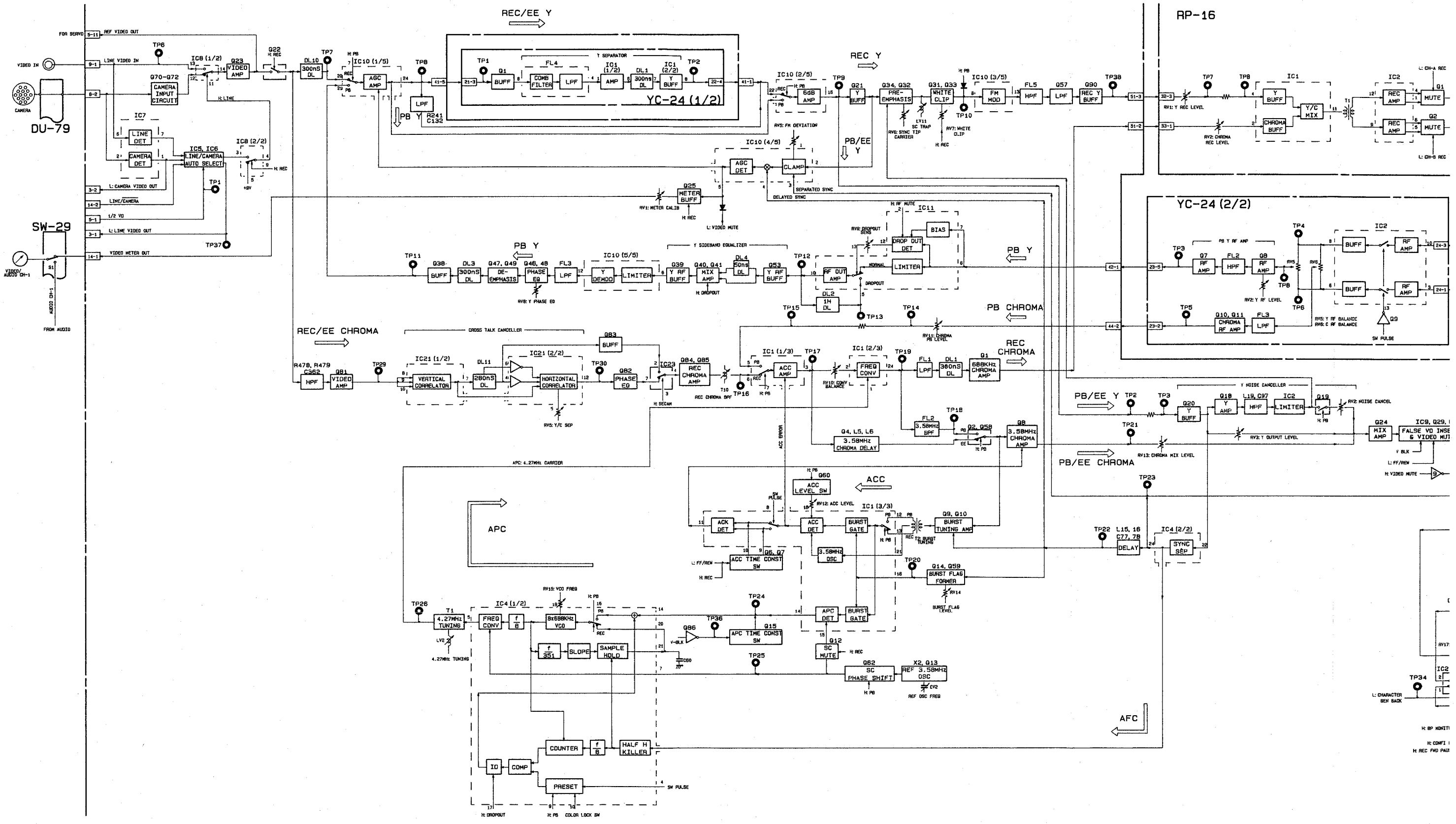

FULL ERASE HEAD
CTL TRACK
0.6mm
CTL-1 R/P HEAD
0.35mm
0.2mm
VIDEO TRACK
EFFECTIVE VIDEO 14.8mm
TAPE SPEED
95.3 mm/sec
TAPE WIDTH, 19mm
VIDEO TRACK
0.052mm
WRITING SPEED
10.26m/sec
0.085mm
4°57"
0.35mm
0.2mm
AUDIO CH-2
R/P HEAD
0.8
0.7
0.8
0.2
AUDIO CH-2 TRACK
AUDIO CH-1 TRACK
AUDIO CH-1 R/P HEAD
AUDIO CH-1 ERASE HEAD

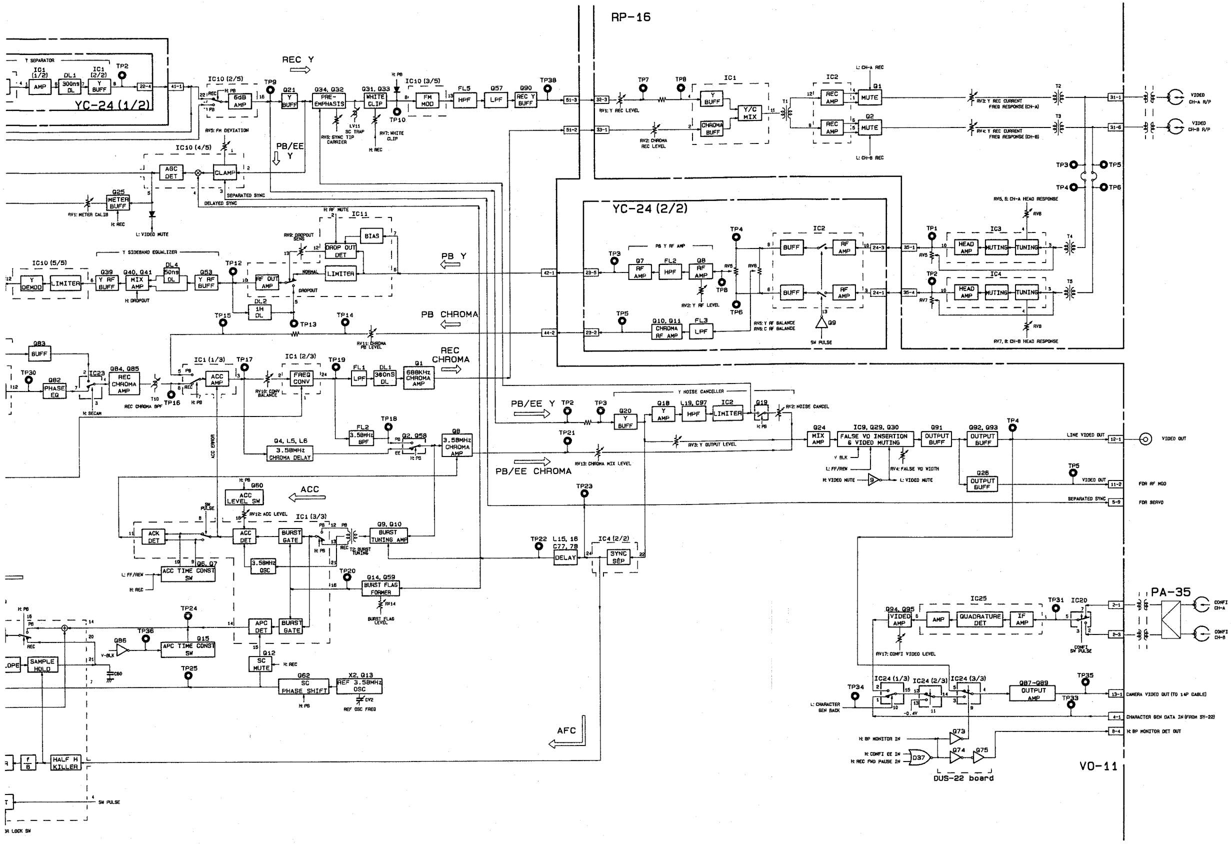
OVERALL


DU-58
AUDIO CH-1
CH-1 ERASE
FULL ERASE
MIC CH-1 IN
MIC CH-2 IN
DU-58
AUDIO CH-2
DU-79
CAMERA
LINE VIDEO IN
CONFI CH-A
CONFI CH-B
BATTERY IN
DC IN
POWER
AU-49
HEAD AMP
REC AMP
CH-1
PB
REC
LINE AMP
AU-51
CH-1
FULL
BIAS/ERASE OSC
MIC AMP
MIC/LINE
CAMERA
MIC AMP
CM-19
CH-2
HEAD AMP
REC AMP
LINE AMP
SW-29
VIDEO
AUDIO CH-1
MIX AMP
OUTPUT AMP
EARPHONE AMP
OUTPUT AMP
AUDIO CH-1/VIDEO
AUDIO CH-1 OUT
EARPHONE OUT
AUDIO CH-2 OUT
AUDIO CH-2
YC-24
VO-11
RP-16
CAMERA
REF VIDEO (FOR SERVO)
LINE
REC
PB
AGC AMP
COMB FILTER
Y MOD
REC AMP
SYNC SEP
Y/C MIX
HPF
CROSS COLOR CANCEL
ACC AMP
REC: 3.58MHz→688KHz
PB: 688KHz→3.58MHz
FREQ CONV
APC
ACC
LINE VIDEO
CHARACTER DATA (FROM SY-22)
CHARACTER INSERT
VIDEO AMP
RF AMP
FM DET
LPF
HPF
RF AMP
HEAD AMP
Y DEMOD
DOC
YC-24
RP-16
VIDEO CH-A R/P
VIDEO CH-B R/P
LINE VIDEO OUT
PS-42
CAMERA 12V
UNREG 12V
EVER 5V REG
EVER 5V
UNREG 12V
PB 10.5V REG
PB 10.5V
+10.5V REG
REG +10.5V
BATT MIRROR
REG -10.5V
DC-DC CONV
REG 5V
UNSW 5V
METER DRIVER
BATTERY
KY-53
KEY FUNCTION
HUMID DET
SY-18
MASTER CONTROL
HUMID
REMOTE
DECODER
CASSETTE IN
MISS REC
CASSETTE LOCK
THREAD END
UNTHREAD END
EJECT
CTL
REEL FG
PINCH ON
SPEED PG (A)
SPEED PG (B)
PHASE PG
DRUM SPEED SERVO PWM
DRUM PHASE SERVO PWM
1/2VD
PB SYNC
REF VIDEO
SYNC SEP
REF SYNC
COMPARATOR
DME
FG-A
FG-B
CAPSTAN SPEED SERVO PWM
FG COUNTER
REC
PB
CAPSTAN PHASE SERVO PWM
DU-58
CTL R/P
CTL PB AMP
CTL REC AMP
1/2VD
PC-22
PHOTO INTERRUPTER
FG-A, B
REEL SERVO

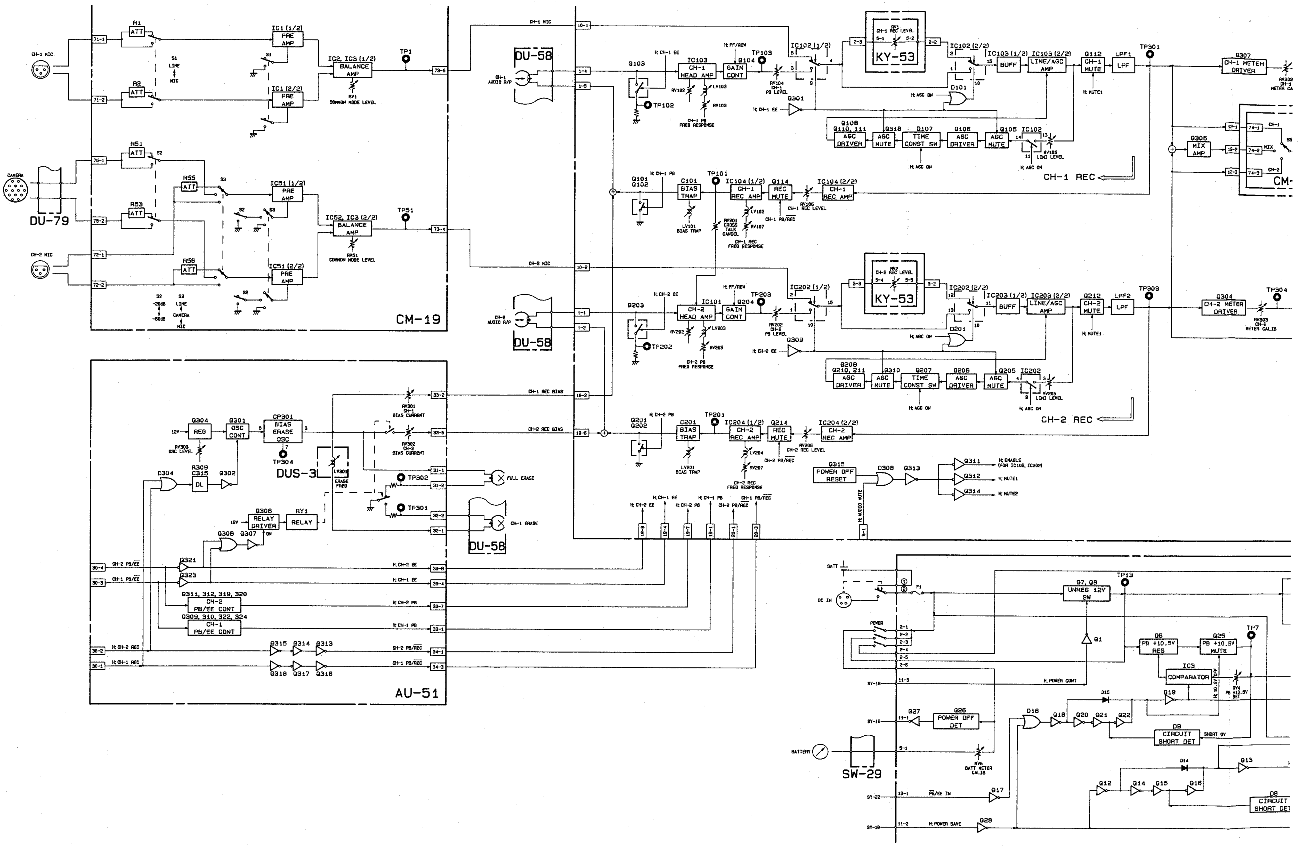

AU-49
CH-1
HEAD AMP
PB
REC
LINE AMP
REC AMP
SW-29
VIDEO
AUDIO CH-1
AUDIO CH-1/VIDEO
BIAS/ERASE OSC
AU-51
MIX AMP
OUTPUT AMP
AUDIO CH-1 OUT
IC AMP
EARPHONE AMP
EARPHONE OUT
IC AMP
CM-19
CH-2
REC
LINE AMP
EAD AMP
PB
OUTPUT AMP
AUDIO CH-2 OUT
EC AMP
AUDIO CH-2
YC-24
VO-11
RP-16
F VIDEO (FOR SERVO)
COMB FILTER
REC
PB
AGC AMP
Y MOD
REC AMP
VIDEO CH-A R/P
VIDEO CH-B R/P
SYNC SEP
HPF
CROSS COLOR CANCEL
REC
PB
REC:3.58MHz→688KHz
PB:688KHz→3.58MHz
ACC AMP
FREQ CONV
Y/C MIX
LINE VIDEO OUT
APC
DED
CHARACTER DATA (FROM SY-22)
ACC
ER
VIDEO AMP
FM DET
LPF
RF AMP
HEAD AMP
Y DEMOD
DOC
HPF
YC-24
RP-16
UNREG 12V
EVER 5V REG
EVER 5V
UNREG 12V
PB 10.5V REG
PB 10.5V
+10.5V REG
REG +10.5V
BATT MIRROR
REG -10.5V
DC-DC CONV
REG 5V
UNSW 5V
METER DRIVER
BATTERY
PS-42
KY-53
KEY FUNCTION
HUMID DET
SY-18
MASTER CONTROL
SY-53
DISPLAY CONTROL
LCD
SY-23
SOLENOIDE DRIVER
T BRAKE
S BRAKE
T IDLER
S IDLER
PINCH
HUMID
REMOTE
DECODER
MECHANISM SOLENOIDE CONTROL
CASSETTE IN
MISS REC
CASSETTE LOCK
THREAD END
UNTHREAD END
EJECT
M
LOADING
EDIT CONTROL
CHARACTER GEN
VO-11
CTL
REEL FG
PINCH ON
INSTANT START CONTROL
SV-57
SY-22
SPEED PG (A)
SPEED PG (B)
DRUM SPEED SERVO PWM
DRUM MOTOR DRIVER
M
DRUM
NORMAL
PHASE PG
DRUM PHASE SERVO PWM
1/2VD
AFC
AFC
PB SYNC
COMPARATOR
REF VIDEO
SYNC SEP
REF SYNC
DME
FG-A
FG-B
CAPSTAN SPEED SERVO PWM
CAPSTAN MOTOR DRIVER
M
CAPSTAN
DU-58
FG COUNTER
REC
PB
CAPSTAN PHASE SERVO PWM
CTL R/P
CTL PB AMP
1/2VD
CTL REC AMP
PC-22
PHOTO INTERRUPTER
FG-A, B
REEL SERVO
REEL MOTOR DRIVER
M
REEL
SV-57
VO-6800

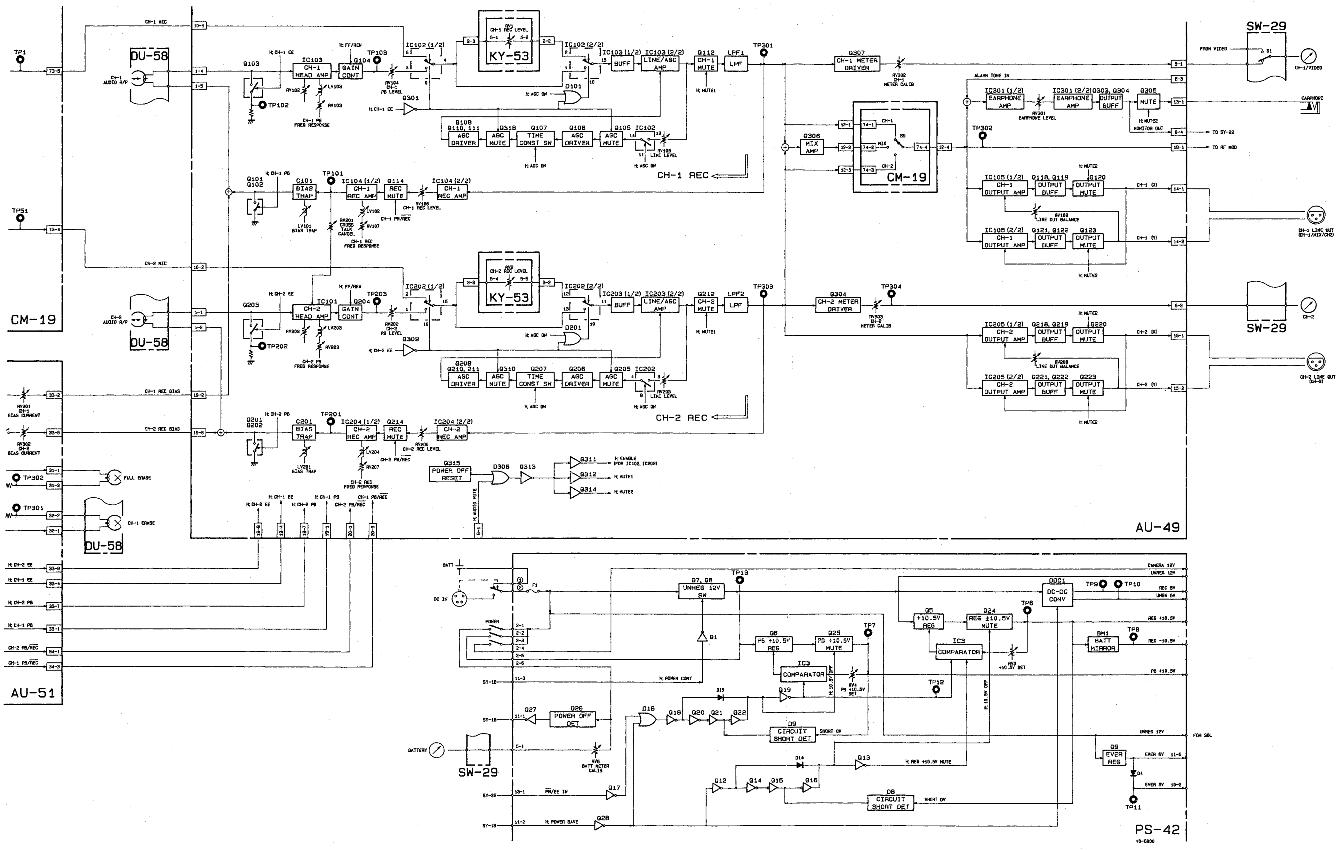
VIDEO


REC/EE Y
REC Y
PB/EE Y
PB Y
REC/EE CHROMA
PB CHROMA
REC CHROMA
PB/EE Y
PB/EE CHROMA
ACC
APC
AFC
DU-79
SW-29
YC-24 (1/2)
YC-24 (2/2)
RP-16
VIDEO IN
CAMERA
LINE VIDEO IN
REF VIDEO OUT
FOR SERVO
CAMERA INPUT CIRCUIT
LINE DET
CAMERA DET
LINE/CAMERA AUTO SELECT
VIDEO AMP
AGC AMP
300nS DL
BUFF
COMB FILTER
LPF
AMP
Y BUFF
AGC DET
CLAMP
METER BUFF
6dB AMP
PRE-EMPHASIS
WHITE CLIP
FM MOD
HPF
REC Y BUFF
DE-EMPHASIS
PHASE EQ
Y DEMOD
LIMITER
Y RF BUFF
MIX AMP
50nS DL
RF OUT AMP
DROP OUT DET
BIAS
1H DL
VERTICAL CORRELATOR
280nS DL
HORIZONTAL CORRELATOR
PHASE EQ
REC CHROMA AMP
ACC AMP
FREQ CONV
688KHz CHROMA AMP
3.58MHz BPF
3.58MHz CHROMA AMP
3.58MHz CHROMA DELAY
ACC LEVEL SW
ACK DET
ACC DET
BURST GATE
BURST TUNING AMP
3.58MHz OSC
ACC TIME CONST SW
BURST FLAG FORMER
4.27MHz TUNING
8x688KHz VCO
SLOPE
SAMPLE HOLD
APC TIME CONST SW
APC DET
SC MUTE
SC PHASE SHIFT
REF 3.58MHz OSC
COUNTER
HALF H KILLER
ID
COMP
PRESET
DELAY
SYNC SEP
REC AMP
MUTE
Y/C MIX
CHROMA BUFF
RF AMP
CHROMA RF AMP
Y NOISE CANCELLER
MIX AMP
FALSE VD INSE & VIDEO MUT
TP1
TP2
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP26
TP29
TP30
TP36
TP37
TP38

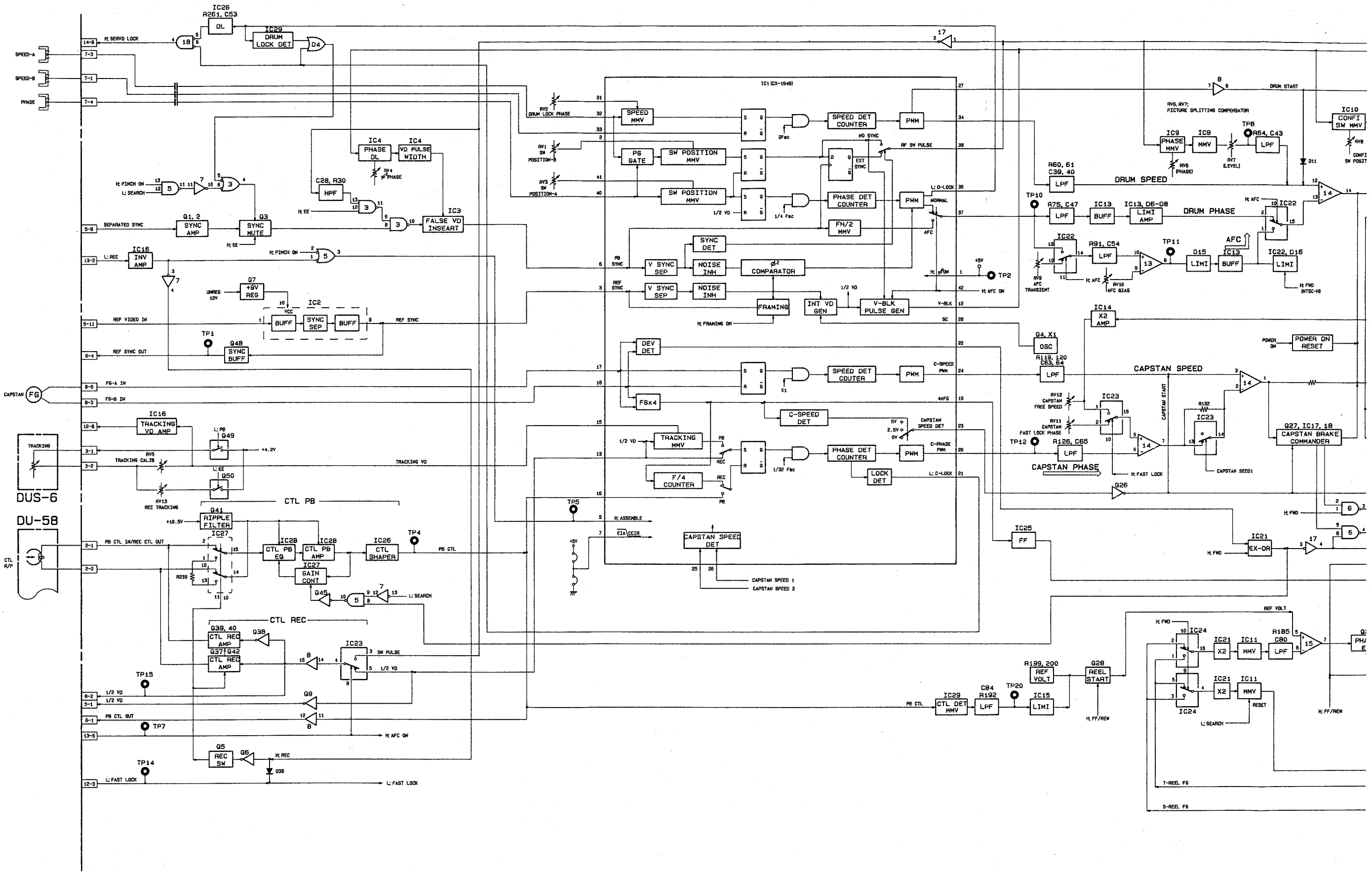

YC-24 (1/2)
Y SEPARATOR
IC1 (1/2) AMP
DL1 300ns DL
IC1 (2/2) Y BUFF
TP2
REC Y
IC10 (2/5) 6dB AMP
TP9
Q21 Y BUFF
Q34, Q32 PRE-EMPHASIS
Q31, Q33 WHITE CLIP
IC10 (3/5) FM MOD
TP10
FL5 HPF
Q57 LPF
Q90 REC Y BUFF
TP38
RV5: FM DEVIATION
RV6: SYNC TIP CARRIER
LV11 SC TRAP
RV7: WHITE CLIP
H: REC
PB/EE Y
IC10 (4/5)
AGC DET
CLAMP
SEPARATED SYNC
DELAYED SYNC
Q25 METER BUFF
RV1: METER CALIB
L: VIDEO MUTE
IC11
BIAS
DROP OUT DET
LIMITER
RV9: DROPOUT SENS
H: RF MUTE
NORMAL
DROPOUT
PB Y
Y SIDEBAND EQUALIZER
IC10 (5/5) Y DEMOD LIMITER
Q39 Y RF BUFF
Q40, Q41 MIX AMP
DL4 50ns DL
Q53 Y RF BUFF
TP12
RF OUT AMP
H: DROPOUT
DL2 1H DL
TP15
TP13
TP14
PB CHROMA
RV11: CHROMA PB LEVEL
Q83 BUFF
TP30
Q82 PHASE EQ
IC23
H: SECAM
Q84, Q85 REC CHROMA AMP
REC CHROMA BPF
TP16
IC1 (1/3) ACC AMP
TP17
IC1 (2/3) FREQ CONV
RV10: CONV BALANCE
TP19
FL1 LPF
DL1 380nS DL
Q1 688KHz CHROMA AMP
REC CHROMA
ACC ERROR
Q4, L5, L6 3.58MHz CHROMA DELAY
FL2 3.58MHz BPF
TP18
Q2, Q58
Q8 3.58MHz CHROMA AMP
H: PB
Q60 ACC LEVEL SW
ACC
RV12: ACC LEVEL
SW PULSE
ACK DET
ACC DET
IC1 (3/3)
BURST GATE
Q9, Q10 BURST TUNING AMP
T2: BURST TUNING
Q6, Q7 ACC TIME CONST SW
L: FF/REW
H: REC
3.58MHz OSC
TP20
Q14, Q59 BURST FLAG FORMER
RV14 BURST FLAG LEVEL
TP24
APC DET
BURST GATE
Q86
TP36
Q15 APC TIME CONST SW
V-BLK
SAMPLE HOLD
C80
TP25
Q12 SC MUTE
Q62 SC PHASE SHIFT
X2, Q13 REF 3.58MHz OSC
CV2 REF OSC FREQ
HALF H KILLER
SW PULSE
LOCK SW
RP-16
TP7
TP8
IC1
Y BUFF
Y/C MIX
CHROMA BUFF
RV1: Y REC LEVEL
RV2: CHROMA REC LEVEL
T1
IC2
REC AMP
Q1 MUTE
Q2 MUTE
L: CH-A REC
L: CH-B REC
RV3: Y REC CURRENT FREQ RESPONSE (CH-A)
RV4: Y REC CURRENT FREQ RESPONSE (CH-B)
T2
T3
VIDEO CH-A R/P
VIDEO CH-B R/P
TP3 TP5
TP4 TP6
RV5, 6: CH-A HEAD RESPONSE
YC-24 (2/2)
PB Y RF AMP
TP3
Q7 RF AMP
FL2 HPF
Q8 RF AMP
TP4
IC2
BUFF
RF AMP
TP8
TP6
RV2: Y RF LEVEL
RV5: Y RF BALANCE
RV6: C RF BALANCE
Q9
SW PULSE
TP5
Q10, Q11 CHROMA RF AMP
FL3 LPF
TP1
IC3 HEAD AMP MUTING TUNING
T4
TP2
IC4 HEAD AMP MUTING TUNING
T5
RV7, 8: CH-B HEAD RESPONSE
PB/EE Y
TP2
TP3
Y NOISE CANCELLER
Q20 Y BUFF
Q18 Y AMP
L19, C97 HPF
IC2 LIMITER
Q19
RV2: NOISE CANCEL
TP21
RV3: Y OUTPUT LEVEL
PB/EE CHROMA
RV13: CHROMA MIX LEVEL
Q24 MIX AMP
IC9, Q29, Q30 FALSE VD INSERTION & VIDEO MUTING
Y BLK
L: FF/REW
H: VIDEO MUTE
L: VIDEO MUTE
RV4: FALSE VD WIDTH
Q91 OUTPUT BUFF
Q92, Q93 OUTPUT BUFF
TP4
LINE VIDEO OUT
VIDEO OUT
TP5
Q26 OUTPUT BUFF
FOR RF MOD
SEPARATED SYNC
FOR SERVO
TP23
TP22
L15, 16 C77, 78 DELAY
IC4 (2/2) SYNC SEP
AFC
PA-35
IC25
TP31
IC20
Q94, Q95 VIDEO AMP
AMP
QUADRATURE DET
IF AMP
CONFI CH-A
CONFI CH-B
CONFI SW PULSE
RV17: CONFI VIDEO LEVEL
TP34
IC24 (1/3)
IC24 (2/3)
IC24 (3/3)
Q87-Q89 OUTPUT AMP
TP35
TP33
L: CHARACTER GEN BACK
CAMERA VIDEO OUT (TO 14P CABLE)
CHARACTER GEN DATA IN (FROM SY-22)
H: BP MONITOR DET OUT
H: BP MONITOR IN
H: CONFI EE IN
H: REC FWD PAUSE IN
D37
Q73
Q74
Q75
DUS-22 board
VO-11

AUDIO


CH-1 MIC
R1
ATT
R2
ATT
S1
LINE
MIC
IC1 (1/2)
PRE AMP
IC1 (2/2)
PRE AMP
IC2, IC3 (1/2)
BALANCE AMP
RV1
COMMON MODE LEVEL
TP1
CAMERA
DU-79
R51
ATT
R53
ATT
R55
ATT
R56
ATT
S2
S3
IC51 (1/2)
PRE AMP
IC51 (2/2)
PRE AMP
IC52, IC3 (2/2)
BALANCE AMP
RV51
COMMON MODE LEVEL
TP51
CH-2 MIC
S2 -20dB -60dB
S3 LINE CAMERA MIC
CM-19
CH-1 MIC
CH-2 MIC
DU-58
CH-1 AUDIO R/P
CH-2 AUDIO R/P
DU-58
Q103
TP102
IC103
CH-1 HEAD AMP
RV102
LV103
RV103
CH-1 PB FREQ RESPONSE
GAIN CONT
H: FF/REW
TP103
Q104
RV104 CH-1 PB LEVEL
Q301
H: CH-1 EE
IC102 (1/2)
KY-53
RV1 CH-1 REC LEVEL
IC102 (2/2)
IC103 (1/2)
BUFF
IC103 (2/2)
LINE/AGC AMP
Q112
CH-1 MUTE
H: MUTE1
LPF1
LPF
TP301
D101
H: AGC ON
Q108 Q110, 111
AGC DRIVER
Q318
AGC MUTE
Q107
TIME CONST SW
Q106
AGC DRIVER
Q105
AGC MUTE
IC102
RV105 LIMI LEVEL
CH-1 REC
Q101 Q102
H: CH-1 PB
C101
BIAS TRAP
LV101 BIAS TRAP
TP101
IC104 (1/2)
CH-1 REC AMP
LV102
RV201 CROSS TALK CANCEL
RV107
CH-1 REC FREQ RESPONSE
Q114
REC MUTE
CH-1 PB/REC
RV106 CH-1 REC LEVEL
IC104 (2/2)
CH-1 REC AMP
Q307
CH-1 METER DRIVER
RV302 CH-1 METER CALIB
Q306
MIX AMP
CH-1
MIX
CH-2
CM-
Q203
TP202
IC201
CH-2 HEAD AMP
RV202
LV203
RV203
CH-2 PB FREQ RESPONSE
GAIN CONT
TP203
Q204
RV202 CH-2 PB LEVEL
Q309
H: CH-2 EE
IC202 (1/2)
KY-53
RV2 CH-2 REC LEVEL
IC202 (2/2)
IC203 (1/2)
BUFF
IC203 (2/2)
LINE/AGC AMP
Q212
CH-2 MUTE
LPF2
LPF
TP303
D201
Q208 Q210, 211
AGC DRIVER
Q310
AGC MUTE
Q207
TIME CONST SW
Q206
AGC DRIVER
Q205
AGC MUTE
IC202
RV205 LIMI LEVEL
CH-2 REC
Q304
CH-2 METER DRIVER
TP304
RV303 CH-2 METER CALIB
Q201 Q202
H: CH-2 PB
C201
BIAS TRAP
LV201 BIAS TRAP
TP201
IC204 (1/2)
CH-2 REC AMP
LV204
RV207
CH-2 REC FREQ RESPONSE
Q214
REC MUTE
CH-2 PB/REC
RV206 CH-2 REC LEVEL
IC204 (2/2)
CH-2 REC AMP
Q315
POWER OFF RESET
Q308
Q313
Q311
H: ENABLE (FOR IC102, IC202)
Q312
H: MUTE1
Q314
H: MUTE2
H: AUDIO MUTE
H: CH-1 EE
H: CH-2 EE
H: CH-2 PB
H: CH-1 PB
CH-2 PB/REC
CH-1 PB/REC
Q304
REG
12V
RV303 OSC LEVEL
Q301
OSC CONT
CP301
BIAS ERASE OSC
TP304
DUS-3
LY301 ERASE FREQ
RV301 CH-1 BIAS CURRENT
RV302 CH-2 BIAS CURRENT
CH-1 REC BIAS
CH-2 REC BIAS
TP302
FULL ERASE
TP301
CH-1 ERASE
DU-58
D304
R309 C315
DL
Q302
Q306
RELAY DRIVER
RY1
RELAY
Q308
Q307
ON
CH-2 PB/EE
CH-1 PB/EE
Q321
Q323
Q311, 312, 319, 320
CH-2 PB/EE CONT
Q309, 310, 322, 324
CH-1 PB/EE CONT
H: CH-2 REC
H: CH-1 REC
Q315 Q314 Q313
Q318 Q317 Q316
AU-51
BATT
DC IN
F1
POWER
Q7, Q8
UNREG 12V SW
TP13
Q1
Q6
PB +10.5V REG
Q25
PB +10.5V MUTE
TP7
IC3
COMPARATOR
RV4 PB +10.5V SET
H: POWER CONT
D15
Q19
Q27
Q26
POWER OFF DET
D16
Q18
Q20
Q21
Q22
D9
CIRCUIT SHORT DET
SHORT 0V
BATTERY
SW-29
RV6 BATT METER CALIB
D14
Q13
Q12
Q14
Q15
Q16
D8
CIRCUIT SHORT DET
PB/EE IN
Q17
H: POWER SAVE
Q28
SY-18
SY-22


DU-58
CM-19
AU-51
KY-53
CM-19
SW-29
AU-49
PS-42
TP1
TP51
TP102
TP103
TP101
TP202
TP203
TP201
TP301
TP302
TP303
TP304
IC103 CH-1 HEAD AMP
Q104 GAIN CONT
IC102 (1/2)
IC102 (2/2)
IC103 (1/2) BUFF
IC103 (2/2) LINE/AGC AMP
Q112 CH-1 MUTE
LPF1 LPF
Q307 CH-1 METER DRIVER
Q306 MIX AMP
Q108 Q110, 111 AGC DRIVER
Q318 AGC MUTE
Q107 TIME CONST SW
Q106 AGC DRIVER
Q105 AGC MUTE
D101
Q301
CH-1 REC
C101 BIAS TRAP
IC104 (1/2) CH-1 REC AMP
Q114 REC MUTE
IC104 (2/2) CH-1 REC AMP
IC101 CH-2 HEAD AMP
Q204 GAIN CONT
IC202 (1/2)
IC202 (2/2)
IC203 (1/2) BUFF
IC203 (2/2) LINE/AGC AMP
Q212 CH-2 MUTE
LPF2 LPF
Q304 CH-2 METER DRIVER
Q208 Q210, 211 AGC DRIVER
Q310 AGC MUTE
Q207 TIME CONST SW
Q206 AGC DRIVER
Q205 AGC MUTE
D201
Q309
CH-2 REC
C201 BIAS TRAP
IC204 (1/2) CH-2 REC AMP
Q214 REC MUTE
IC204 (2/2) CH-2 REC AMP
Q315 POWER OFF RESET
D308
Q313
Q311 H: ENABLE (FOR IC102, IC202)
Q312 H: MUTE1
Q314 H: MUTE2
IC301 (1/2) EARPHONE AMP
IC301 (2/2) EARPHONE AMP
Q303, Q304 OUTPUT BUFF
Q305 MUTE
IC105 (1/2) CH-1 OUTPUT AMP
Q118, Q119 OUTPUT BUFF
Q120 OUTPUT MUTE
IC105 (2/2) CH-1 OUTPUT AMP
Q121, Q122 OUTPUT BUFF
Q123 OUTPUT MUTE
IC205 (1/2) CH-2 OUTPUT AMP
Q218, Q219 OUTPUT BUFF
Q220 OUTPUT MUTE
IC205 (2/2) CH-2 OUTPUT AMP
Q221, Q222 OUTPUT BUFF
Q223 OUTPUT MUTE
TO SY-22
TO RF MOD
EARPHONE
CH-1/VIDEO
CH-2
CH-1 LINE OUT (CH-1/MIX/CH2)
CH-2 LINE OUT (CH-2)
FULL ERASE
CH-1 ERASE
BATT
DC IN
POWER
Q7, Q8 UNREG 12V SW
TP13
Q1
Q6 PB +10.5V REG
Q25 PB +10.5V MUTE
TP7
IC3 COMPARATOR
Q5 +10.5V REG
Q24 REG ±10.5V MUTE
TP6
DDC1 DC-DC CONV
TP9
TP10
BM1 BATT MIRROR
TP8
TP12
Q27
Q26 POWER OFF DET
D16
Q18
Q20
Q21
Q22
Q19
D15
D9 CIRCUIT SHORT DET
D14
Q13
Q12
Q14
Q15
Q16
D8 CIRCUIT SHORT DET
Q17
Q28
Q9 EVER REG
D4
TP11
BATTERY
SW-29
CAMERA 12V
UNREG 12V
REG 5V
UNSW 5V
REG +10.5V
REG -10.5V
PB +10.5V
UNREG 12V
FOR SOL
EVER 5V
SY-18
SY-22
VO-6800

SERVO


IC26
R261, C53
DL
IC29
DRUM LOCK DET
D4
H: SERVO LOCK
SPEED-A
SPEED-B
PHASE
14-8
7-3
7-1
7-4
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IC4
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RV4 PHASE
H: PINCH ON
L: SEARCH
C28, R30
HPF
H: EE
IC3
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SEPARATED SYNC
Q1, 2
SYNC AMP
Q3
SYNC MUTE
5-9
L: REC
IC16
INV AMP
13-2
H: PINCH ON
UNREG 12V
Q7
+9V REG
IC2
VCC
BUFF
SYNC SEP
BUFF
REF SYNC
REF VIDEO IN
5-11
TP1
Q48
SYNC BUFF
REF SYNC OUT
6-4
CAPSTAN
FG
FG-A IN
FG-B IN
8-5
8-3
IC16
TRACKING VD AMP
12-6
L: PB
Q49
+4.2V
TRACKING
3-1
3-2
RV5
TRACKING CALIB
TRACKING VD
L: EE
Q50
RV13
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DUS-6
DU-58
CTL PB
Q41
+10.5V
RIPPLE FILTER
IC27
PB CTL IN/REC CTL OUT
2-1
2-2
CTL R/P
R239
IC28
CTL PB EQ
IC28
CTL PB AMP
IC27
GAIN CONT
IC26
CTL SHAPER
TP4
PB CTL
Q45
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CTL REC AMP
Q38
Q37, Q42
CTL REC AMP
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1/2 VD
TP15
6-2
5-1
6-1
13-5
Q9
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TP7
H: AFC ON
Q5
REC SW
Q6
H: REC
D38
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12-3
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RV2
DRUM LOCK PHASE
SPEED MMV
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SW POSITION-B
PG GATE
SW POSITION MMV
RV3
SW POSITION-A
SW POSITION MMV
2Fac
SPEED DET COUNTER
PWM
NO SYNC
RF SW PULSE
EXT SYNC
PHASE DET COUNTER
1/4 Fac
FH/2 MMV
L: D-LOCK
NORMAL
AFC
PB SYNC
V SYNC SEP
SYNC DET
NOISE INH
φ² COMPARATOR
+5V
H: φ/ON
TP2
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V SYNC SEP
NOISE INH
FRAMING
INT VD GEN
V-BLK PULSE GEN
H: AFC ON
V-BLK
SC
H: FRAMING ON
DEV DET
SPEED DET COUTER
PWM
C-SPEED PWM
X1
FGx4
4xFG
C-SPEED DET
5V
2.5V
0V
CAPSTAN SPEED DET
1/2 VD
TRACKING MMV
PB
REC
F/4 COUNTER
1/32 Fac
PHASE DET COUNTER
C-PHASE PWM
LOCK DET
L: C-LOCK
TP5
H: ASSEMBLE
EIA/CCIR
CAPSTAN SPEED DET
CAPSTAN SPEED 1
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17
8
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IC9
MMV
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RV7 (LEVEL)
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TP10
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R91, C54
LPF
H: AFC
RV10
AFC BIAS
TP11
D15
LIMI
AFC
IC13
BUFF
IC22, D16
LIMI
H: FWD (NTSC-H)
IC14
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POWER ON RESET
Q4, X1
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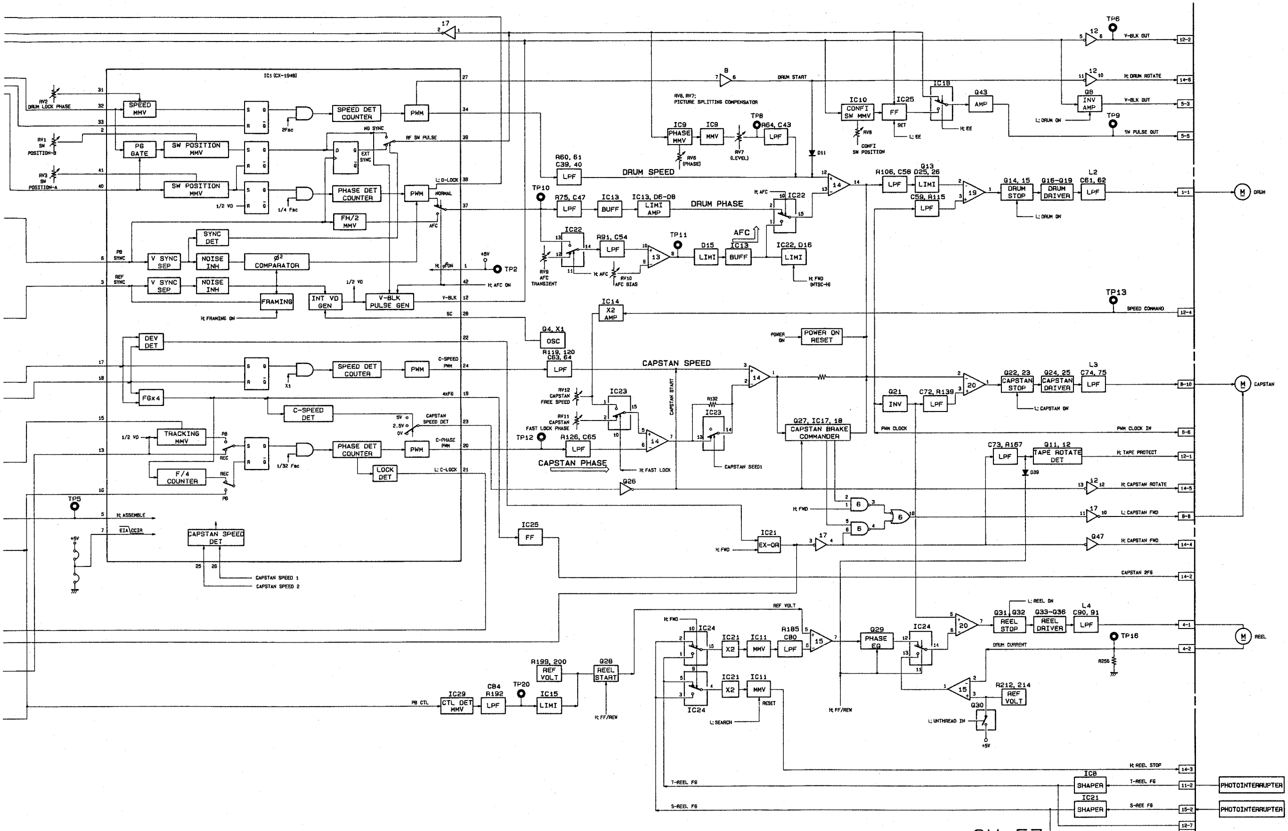
H: FWD
IC25
FF
IC21
EX-OR
H: FWD
REF VOLT
H: FWD
IC24
IC21
X2
IC11
MMV
R185
C80
LPF
IC21
X2
IC11
MMV
RESET
IC24
L: SEARCH
H: FF/REW
T-REEL FG
S-REEL FG
R199, 200
REF VOLT
Q28
REEL START
H: FF/REW
TP20
IC15
LIMI
IC29
CTL DET MMV
C84
R192
LPF
PB CTL


IC1 (CX-1948)
RV2 DRUM LOCK PHASE
RV1 SW POSITION-B
RV3 SW POSITION-A
SPEED MMV
PG GATE
SW POSITION MMV
SW POSITION MMV
2Fac
1/2 VD
1/4 Fac
SPEED DET COUNTER
PWM
NO SYNC
EXT SYNC
RF SW PULSE
PHASE DET COUNTER
FH/2 MMV
PWM
L: D-LOCK
NORMAL
AFC
SYNC DET
PB SYNC
V SYNC SEP
NOISE INH
φ2 COMPARATOR
REF SYNC
V SYNC SEP
NOISE INH
FRAMING
H: FRAMING ON
INT VD GEN
1/2 VD
V-BLK PULSE GEN
V-BLK
SC
H: φON
+5V
TP2
H: AFC ON
DEV DET
SPEED DET COUTER
C-SPEED PWM
X1
FGx4
4xFG
C-SPEED DET
CAPSTAN SPEED DET
5V
2.5V
0V
TRACKING MMV
1/2 VD
PB
REC
F/4 COUNTER
1/32 Fac
PHASE DET COUNTER
PWM
C-PHASE PWM
LOCK DET
L: C-LOCK
TP5
H: ASSEMBLE
EIA/CCIR
+5V
CAPSTAN SPEED DET
CAPSTAN SPEED 1
CAPSTAN SPEED 2
17
8
DRUM START
RV6, RV7: PICTURE SPLITTING COMPENSATOR
IC9 PHASE MMV
IC9 MMV
RV6 (PHASE)
RV7 (LEVEL)
TP8
R64, C43
LPF
D11
IC10 CONFI SW MMV
RV8 CONFI SW POSITION
IC25 FF
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L: EE
IC18
H: EE
Q43 AMP
L: DRUM ON
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12
H: DRUM ROTATE
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V-BLK OUT
TP9
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LPF
DRUM SPEED
TP10
R75, C47
LPF
IC13 BUFF
IC13, D6-D8 LIMI AMP
DRUM PHASE
H: AFC
IC22
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D25, 26
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19
Q14, 15 DRUM STOP
Q16-Q19 DRUM DRIVER
L2 C61, 62
LPF
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M DRUM
IC22
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R91, C54
LPF
H: AFC
RV10 AFC BIAS
13
TP11
D15 LIMI
AFC
IC13 BUFF
IC22, D16 LIMI
H: FWD (NTSC-M)
IC14 X2 AMP
TP13
SPEED COMMAND
POWER ON
POWER ON RESET
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OSC
R119, 120 C63, 64
LPF
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RV12 CAPSTAN FREE SPEED
IC23
RV11 CAPSTAN FAST LOCK PHASE
CAPSTAN START
R132
IC23
CAPSTAN SEED1
TP12
R126, C65
LPF
14
CAPSTAN PHASE
H: FAST LOCK
Q26
Q27, IC17, 18 CAPSTAN BRAKE COMMANDER
Q21 INV
C72, R139
LPF
PWM CLOCK
20
Q22, 23 CAPSTAN STOP
L: CAPSTAN ON
Q24, 25 CAPSTAN DRIVER
L3 C74, 75
LPF
M CAPSTAN
PWM CLOCK IN
C73, R167
LPF
Q11, 12 TAPE ROTATE DET
H: TAPE PROTECT
D39
12
H: CAPSTAN ROTATE
H: FWD
6
6
6
17
L: CAPSTAN FWD
IC21 EX-OR
H: FWD
17
Q47
H: CAPSTAN FWD
IC25 FF
CAPSTAN 2FG
REF VOLT
H: FWD
IC24
IC21 X2
IC11 MMV
R185 C80
LPF
15
Q29 PHASE EQ
IC24
20
L: REEL ON
Q31, Q32 REEL STOP
Q33-Q36 REEL DRIVER
L4 C90, 91
LPF
M REEL
DRUM CURRENT
TP16
R256
IC21 X2
IC11 MMV
RESET
IC24
L: SEARCH
15
R212, 214 REF VOLT
Q30
L: UNTHREAD IN
+5V
H: FF/REW
R199, 200 REF VOLT
Q28 REEL START
H: FF/REW
PB CTL
IC29 CTL DET MMV
C84 R192
LPF
TP20
IC15 LIMI
H: REEL STOP
IC8 SHAPER
T-REEL FG
PHOTOINTERRUPTER
IC21 SHAPER
S-REEL FG
PHOTOINTERRUPTER
12-2
14-6
5-3
5-5
1-1
12-4
8-10
8-6
12-1
14-5
8-8
14-4
14-2
4-1
4-2
14-3
11-2
15-2
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12-8

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VO-5800

SECTION 13
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TC4013BF 13- 9
TC4022BP 13- 9
TC4024BF 13- 9

TC4030BF 13- 9
TC4049BF 13- 9
TC4050BF 13-10
TC4053BF 13-10
TC4056BF 13-10

TC4069UBF 13-10
TC4071BF 13-10
TC4081BF 13-10
TC4093BF 13-10
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ERB81-004 13-14

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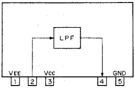
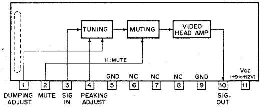
RD??EB 13-14
RD??FB 13-14

TLP801A 13-14

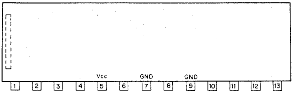
AFL25F15000G1 (MURATA)
ACTIVE LOW-PASS FILTER
— IMPRINTED SIDE VIEW —

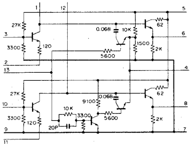

LPF
VEE
Vcc
GND
1
2
3
4
5

BX350 (SONY)
VIDEO HEAD AMP/MUTING
— REAR VIEW —

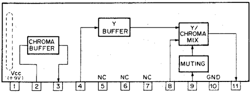

TUNING
MUTING
VIDEO HEAD AMP
H; MUTE
GND
NC
NC
NC
GND
Vcc (+9 to +12V)
1
2
3
4
5
6
7
8
9
10
11
DUMPING ADJUST
MUTE
SIG IN
PEAKING ADJUST
SIG. OUT

BX351 (SONY)
BX351A (SONY)
VIDEO EQUALIZER AMP/CHANNEL SWITCHING
—REAR VIEW—

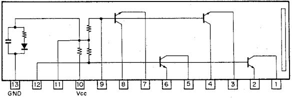

Vcc
GND
GND
1
2
3
4
5
6
7
8
9
10
11
12
13


1
12
5
27K
62
0.068
10K
3
6
3300
120
1500
2K
5600
2
13
4
27K
62
9100
0.068
10
8
10K
3300
5600
3300
120
2K
20P
9
7
11

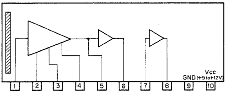
BX373A (SONY)
MIX AMP
— REAR VIEW —


Y BUFFER
Y/ CHROMA MIX
CHROMA BUFFER
MUTING
Vcc (+9V)
NC
NC
NC
GND
1
2
3
4
5
6
7
8
9
10
11

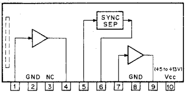
BX374 (SONY)
REC AMP
— IMPRINTED SIDE—


13
12
11
10
9
8
7
6
5
4
3
2
1
GND
Vcc

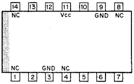
BX389 (SONY)
VIDEO AMPLIFIER
— PRINTED SIDE —

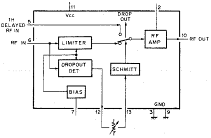

GND
Vcc (+9 to +12V)
1
2
3
4
5
6
7
8
9
10

BX3915A (SONY)
SYNC SEPARATOR
— PRINTED SIDE —

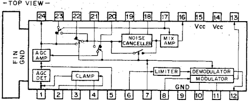

SYNC SEP
GND
NC
GND
(+5 to +13V) Vcc
1
2
3
4
5
6
7
8
9
10

CX121A (SONY)
DROPOUT COMPENSATOR
— TOP VIEW—

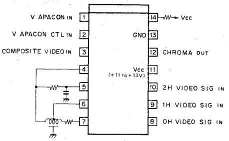

14
13
12
11
10
9
8
NC
Vcc
GND
NC
NC
GND
NC
1
2
3
4
5
6
7

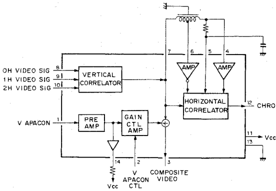

11
Vcc
2
DROP OUT
1H DELAYED RF IN
5
RF IN
6
LIMITER
RF AMP
10
RF OUT
DROPOUT DET
SCHMITT
BIAS
GND
7
12
13
3
9

CX187 (SONY)
LUMINANCE SIGNAL PROCESSER
-TOP VIEW-

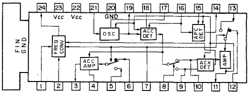

24
23
22
21
20
19
18
17
16
15
14
13
Vcc
Vcc
FIN GND
NOISE CANCELLER
MIX AMP
AGC AMP
AGC DET
CLAMP
LIMITER
DEMODULATOR
MODULATOR
GND
1
2
3
4
5
6
7
8
9
10
11
12

CX22013 (SONY)
DYNAMIC COMB FILTER
— TOP VIEW —

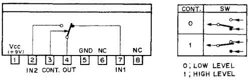

V APACON IN 1
V APACON CTL IN 2
COMPOSITE VIDEO IN 3
4
5
6
7
14 Vcc
GND 13
12 CHROMA OUT
Vcc (+11 to +13V) 11
10 2H VIDEO SIG IN
9 1H VIDEO SIG IN
8 OH VIDEO SIG IN


OH VIDEO SIG 8
1H VIDEO SIG 9
2H VIDEO SIG 10
VERTICAL CORRELATOR
V APACON 1
PRE AMP
GAIN CTL AMP
7
6
5
4
AMP
AMP
HORIZONTAL CORRELATOR
12 CHROMA
11 Vcc
13
14
2
3
Vcc
V APACON CTL
COMPOSITE VIDEO

CX188 (SONY)
– TOP VIEW–

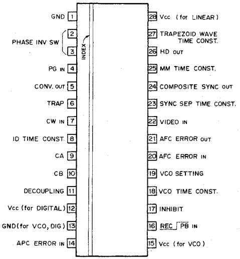

24
23
22
21
20
19
18
17
16
15
14
13
Vcc
Vcc
GND
FIN GND
FREQ CONV
OSC
ACC DET
APC DET
ACC AMP
ACK DET
AMP
1
2
3
4
5
6
7
8
9
10
11
12

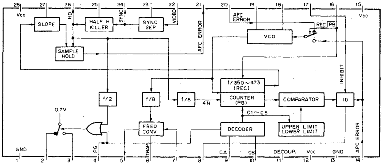
CX20061 (SONY)
ANALOG SWITCH
— SIDE VIEW —


Vcc (+9V)
GND
NC
NC
1
2
3
4
5
6
7
8
IN2
CONT.
OUT
IN1
CONT.
SW
0
1

0 ; LOW LEVEL
1 ; HIGH LEVEL

CX 859 (SONY)
-TOP VIEW-


GND 1
PHASE INV SW 2
3
PG IN 4
CONV. OUT 5
TRAP 6
CW IN 7
ID TIME CONST. 8
CA 9
CB 10
DECOUPLING 11
Vcc (for DIGITAL) 12
GND (for VCO, DIG) 13
APC ERROR IN 14
INDEX
28 Vcc (for LINEAR)
27 TRAPEZOID WAVE TIME CONST.
26 HD OUT
25 MM TIME CONST.
24 COMPOSITE SYNC OUT
23 SYNC SEP TIME CONST.
22 VIDEO IN
21 AFC ERROR OUT
20 AFC ERROR IN
19 VCO SETTING
18 VCO TIME CONST.
17 INHIBIT
16 REC / PB IN
15 Vcc (for VCO)


28
27
26
25
24
23
22
21
20
19
18
17
16
15
Vcc
SLOPE
HD
HALF H KILLER
SYNC
SYNC SEP
VIDEO
AFC ERROR
AFC ERROR
VCO
REC / PB
Vcc
SAMPLE HOLD
INHIBIT
f/350 ~ 473 (REC)
COUNTER (PB)
f/2
f/8
f/8
4H
COMPARATOR
ID
C1 ~ C8
0.7V
FREQ CONV
DECODER
UPPER LIMIT LOWER LIMIT
APC ERROR
GND
PG
TRAP
CA
CB
DECOUP.
Vcc
GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14

DECODER TRUTH TABLE

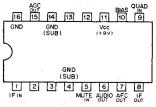
CB / CA	LOW	OPEN	HIGH
LOW	C1	C7	—
OPEN	C4	C5	C6
HIGH	—	✱C2 C3	C8

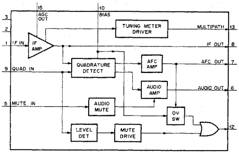
✱ PG : L--- C2
PG : H--- C3

AFC/ APC PRESET DATA

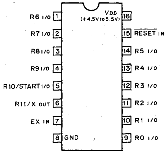
	AFC COUNT DOWN	APC ID COUNT	
		UPPER LIM.	LOWER LIM.
C1	f / 473	105	95
C2	f / 351	129	119
C3	f / 353	137	127
C4	f / 351	118	104
C5	f / 351	131	117
C6	f / 351	144	130
C7	f / 350	136	104
C8	——	125	115

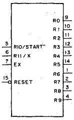
HA12411 (HITACHI)
FM IF AMPLIFIER
QUADRATURE DETECT
AUDIO AMPLIFIER
MUTING
AFC
AGC
TUNING METER DRIVER


AGC OUT
BIAS
QUAD IN
16
15
14
13
12
11
10
9
GND
GND (SUB)
Vcc (+8V)
GND (SUB)
1
2
3
4
5
6
7
8
IF IN
MUTE IN
AUDIO OUT
AFC OUT
IF OUT

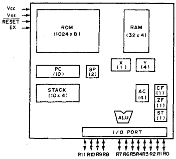

15
AGC OUT
10
BIAS
3
2
1
IF IN
IF AMP
TUNING METER DRIVER
MULTIPATH
13
IF OUT
8
9
QUAD IN
QUADRATURE DETECT
AFC AMP
AFC OUT
7
AUDIO AMP
AUDIO OUT
6
5
MUTE IN
AUDIO MUTE
OV SW
LEVEL DET
MUTE DRIVE
12

MB88201-173N (FUJITSU)
C-MOS 4 BIT MICROCOMPUTER
— TOP VIEW —

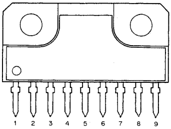

R6 I/O 1
R7 I/O 2
R8 I/O 3
R9 I/O 4
R10/START I/O 5
R11/X OUT 6
EX IN 7
8 GND
VDD (+4.5V to 5.5V)
16
15 RESET IN
14 R5 I/O
13 R4 I/O
12 R3 I/O
11 R2 I/O
10 R1 I/O
9 R0 I/O

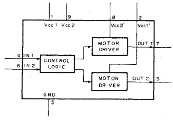

5 R10/START
6 R11/X
7 EX
15 RESET
R0 9
R1 10
R2 11
R3 12
R4 13
R5 14
R6 1
R7 2
R8 3
R9 4

EX ; EXTERNAL X'TAL IN
R0–R11 ; I/O PORT(R) IN/OUT
RESET ; RESET IN
START ; STANDBY RELEASE IN
R11/X ; EXT CLOCK IN/INT CLOCK OUT


Vcc
Vss
RESET
EX
ROM (1024 x 8)
RAM (32 x 4)
X (1)
Y (4)
PC (10)
SP (2)
STACK (10 x 4)
AC (4)
CF (1)
ZF (1)
ST (1)
ALU
I/O PORT
R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1 R0

M54543L (MITSUBISHI)
BI-DIRECTIONAL MOTOR DRIVER
— SIDE VIEW —

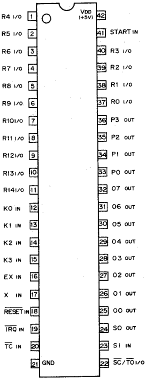


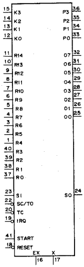

1
9
8
2
Vcc 1
Vcc 2
Vcc2'
Vcc1'
4
IN 1
6
IN 2
CONTROL LOGIC
MOTOR DRIVER
MOTOR DRIVER
OUT 1
7
OUT 2
3
GND
5

IN		OUT		MODE
1	2	1	2	
0	0	Z	Z	NO OPERATION
1	0	1	0	ROTATION
0	1	0	1	REVERSE ROTATION
1	1	0	0	BRAKE

0 : LOW LEVEL
1 : HIGH LEVEL
Z : HIGH IMPEDANCE

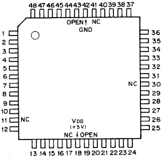
MB88501-207L (FUJITSU)
C-MOS 4-BIT ONE-CHIP MICROCOMPUTER
— TOP VIEW —

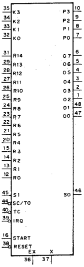

R4 I/O 1
R5 I/O 2
R6 I/O 3
R7 I/O 4
R8 I/O 5
R9 I/O 6
R10 I/O 7
R11 I/O 8
R12 I/O 9
R13 I/O 10
R14 I/O 11
K0 IN 12
K1 IN 13
K2 IN 14
K3 IN 15
EX IN 16
X IN 17
RESET IN 18
IRQ IN 19
TC IN 20
21 GND
42 VDD (+5V)
41 START IN
40 R3 I/O
39 R2 I/O
38 R1 I/O
37 R0 I/O
36 P3 OUT
35 P2 OUT
34 P1 OUT
33 P0 OUT
32 O7 OUT
31 O6 OUT
30 O5 OUT
29 O4 OUT
28 O3 OUT
27 O2 OUT
26 O1 OUT
25 O0 OUT
24 SO OUT
23 SI IN
22 SC/TO I/O


15 K3
14 K2
13 K1
12 K0
11 R14
10 R13
9 R12
8 R11
7 R10
6 R9
5 R8
4 R7
3 R6
2 R5
1 R4
40 R3
39 R2
38 R1
37 R0
23 SI
22 SC/TO
20 TC
19 IRQ
41 START
18 RESET
EX 16
X 17
P3 36
P2 35
P1 34
P0 33
O7 32
O6 31
O5 30
O4 29
O3 28
O2 27
O1 26
O0 25
SO 24

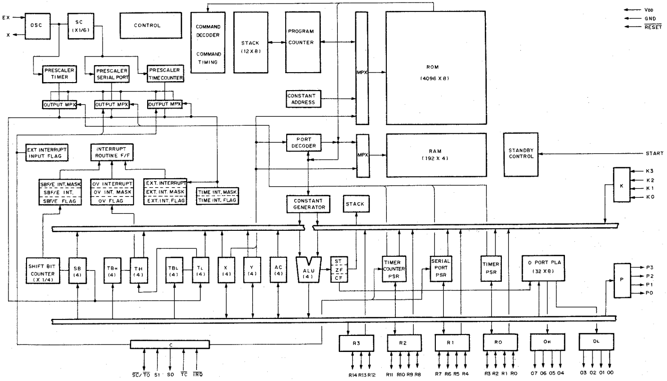
EX ; EXTERNAL CLOCK IN
$\overline{\text{IRQ}}$; INTERRUPT REQUEST IN
K0-K3 ; 4-BIT PARALLEL IN
O0-O7 ; PARALLEL OUT/8-BIT PLA OUT
P0-P3 ; 4-BIT PARALLEL OUT
R0-R14 ; DATA IN/OUT
$\overline{\text{RESET}}$; RESET IN
$\overline{\text{SC/TO}}$; SHIFT CLOCK IN/INT TIMING OUT
SI ; SERIAL DATA IN
SO ; SERIAL DATA OUT
START ; STANDBY OFF IN
X ; CLOCK OUT

MB88501-247M (FUJITSU) FLAT PACKAGE
MB88501-255M (FUJITSU) FLAT PACKAGE
MB88501-256M (FUJITSU) FLAT PACKAGE
C-MOS 4-BIT MICROCOMPUTER
— TOP VIEW —

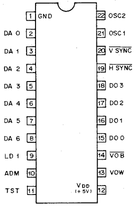

48 47 46 45 44 43 42 41 40 39 38 37
OPEN NC
GND
1 2 3 4 5 6 7 8 9 10 11 12
NC
36 35 34 33 32 31 30 29 28 27 26 25
NC
VDD (+5V)
NC OPEN
13 14 15 16 17 18 19 20 21 22 23 24

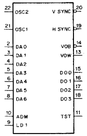

35 K3
34 K2
33 K1
32 K0
31 R14
29 R13
28 R12
27 R11
26 R10
25 R9
24 R8
23 R7
22 R6
21 R5
20 R4
15 R3
14 R2
13 R1
12 R0
45 SI
44 SC/TO
40 TC
39 IRQ
16 START
38 RESET
EX 36
X 37
P3 10
P2 9
P1 8
P0 7
O7 6
O6 5
O5 4
O4 3
O3 2
O2 1
O1 48
O0 47
SO 46

EX ; EXTERNAL CLOCK IN
$\overline{\text{IRQ}}$; INTERRUPT REQUEST IN
K0-K3 ; 4-BIT PARALLEL IN
O0-O7 ; PARALLEL OUT/8-BIT PLA OUT
P0-P3 ; 4-BIT PARALLEL OUT
R0-R14 ; DATA IN/OUT
$\overline{\text{RESET}}$; RESET IN
$\overline{\text{SC/TO}}$; SHIFT CLOCK IN/INT TIMING OUT
SI ; SERIAL DATA IN
SO ; SERIAL DATA OUT
START ; STANDBY OFF IN
X ; CLOCK OUT

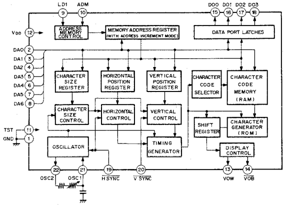

EX
X
OSC
SC (X1/6)
CONTROL
COMMAND DECODER
COMMAND TIMING
STACK (12X8)
PROGRAM COUNTER
MPX
ROM (4096 X 8)
VDD
GND
RESET
PRESCALER TIMER
PRESCALER SERIAL PORT
PRESCALER TIME COUNTER
OUTPUT MPX
OUTPUT MPX
OUTPUT MPX
CONSTANT ADDRESS
PORT DECODER
MPX
RAM (192 X 4)
STANDBY CONTROL
START
EXT INTERRUPT INPUT FLAG
INTERRUPT ROUTINE F/F
SBF/E INT. MASK
SBF/E INT.
SBF/E FLAG
OV INTERRUPT
OV INT. MASK
OV FLAG
EXT. INTERRUPT
EXT. INT. MASK
EXT. INT. FLAG
TIME INT. MASK
TIME INT. FLAG
CONSTANT GENERATOR
STACK
K
K3
K2
K1
K0
SHIFT BIT COUNTER (X 1/4)
SB (4)
TBH (4)
TH (4)
TBL (4)
TL (4)
X (4)
Y (4)
AC (4)
ALU (4)
ST
ZF
CF
TIMER COUNTER PSR
SERIAL PORT PSR
TIMER PSR
O PORT PLA (32 X 8)
P
P3
P2
P1
P0
C
SC/TO SI SO TC IRQ
R3
R2
R1
R0
OH
OL
R14 R13 R12
R11 R10 R9 R8
R7 R6 R5 R4
R3 R2 R1 R0
O7 O6 O5 O4
O3 O2 O1 O0

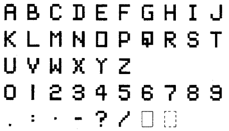
MN1237AD (MATSUSHITA)
C-MOS INDICATES DATA OF 60 CHARACTERS CRT INTERFACE
— TOP VIEW —


1 GND
DA 0 2
DA 1 3
DA 2 4
DA 3 5
DA 4 6
DA 5 7
DA 6 8
LD 1 9
ADM 10
TST 11
VDD (+5V) 12
13 VOW
14 VOB
15 DO 0
16 DO 1
17 DO 2
18 DO 3
19 H SYNC
20 V SYNC
21 OSC 1
22 OSC2

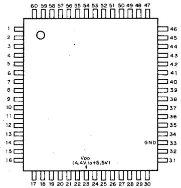

22 OSC2
21 OSC1
2 DA0
3 DA1
4 DA2
5 DA3
6 DA4
7 DA5
8 DA6
10 ADM
9 LD1
V SYNC 20
H SYNC 19
VOB 14
VOW 13
DO0 15
DO1 16
DO2 17
DO3 18
TST 11

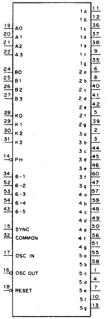
ADM ; ADDRESS MODE SELECT IN
DA0～DA6 ; DATA BUS INPUT
DO0～DO3 ; GENERAL OUTPUT
H SYNC ; H SYNC INPUT
LD1 ; STROBE PULSE INPUT
OSC1,2 ; OSC
TST ; TEST
VOB ; BACKGROUND OUTPUT
VOW ; CHARACTERS OUTPUT
V SYNC ; V SYNC INPUT


LD1
ADM
DO0 DO1 DO2 DO3
VDD
DA0 DA1 DA2 DA3 DA4 DA5 DA6
TST
GND
ADDRESS MEMORY CONTROL
MEMORY ADDRESS REGISTER (WITH ADDRESS INCREMENT MODE)
DATA PORT LATCHES
CHARACTER SIZE REGISTER
HORIZONTAL POSITION REGISTER
VERTICAL POSITION REGISTER
CHARACTER CODE SELECTOR
CHARACTER CODE MEMORY (RAM)
CHARACTER SIZE CONTROL
HORIZONTAL CONTROL
VERTICAL CONTROL
SHIFT REGISTER
CHARACTER GENERATOR (ROM)
OSCILLATOR
TIMING GENERATOR
DISPLAY CONTROL
OSC2 OSC1
H SYNC
V SYNC
VOW
VOB

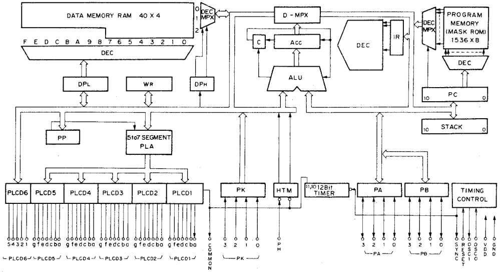

A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z
0 1 2 3 4 5 6 7 8 9
. : · - ? /

MSM58421-74GSK (OKI) FLAT PACKAGE
C-MOS 4-BIT MICROCOMPUTER WITH LCD DRIVER
— TOP VIEW —

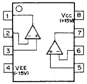

GND
VDD (4.4V to +5.5V)


A0 A1 A2 A3
B0 B1 B2 B3
K0 K1 K2 K3
PH
6-1 6-2 6-3 6-4 6-5
SYNC
COMMON
OSC IN
OSC OUT
RESET
1a 1b 1c 1d 1e 1f 1g
2a 2b 2c 2d 2e 2f 2g
3a 3b 3c 3d 3e 3f 3g
4a 4b 4c 4d 4e 4f 4g
5a 5b 5c 5d 5e 5f 5g

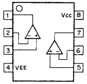
1a～1g ; LCD 1 DIGHT a to g DRIVE OUT
2a～2g ; LCD 2 DIGHT a to g DRIVE OUT
3a～3g ; LCD 3 DIGHT a to g DRIVE OUT
4a～4g ; LCD 4 DIGHT a to g DRIVE OUT
5a～5g ; LCD 5 DIGHT a to g DRIVE OUT
6-1～6-5 ; LCD 6-1 to 6-5 DRIVE OUT
A0 ～ A3 ; PORT A0 to PORT A3 I/O
B0 ～ B3 ; PORT B0 to PORT B3 I/O
K0 ～ K3 ; PORT K0 to PORT K3 IN
PH ; PORT H IN
COMMON ; LCD COMMON OUT
SYNC ; SYNC OUT
OSC IN ; OSC IN
OSC OUT ; OSC OUT
RESET ; RESET IN


DATA MEMORY RAM 40 X 4
DEC MPX
F E D C B A 9 8 7 6 5 4 3 2 1 0
DEC
DPL
WR
DPH
D-MPX
C
Acc
ALU
DEC
IR
DEC MPX
PROGRAM MEMORY (MASK ROM) 1536 X 8
DEC
PC
STACK
PP
5 to 7 SEGMENT PLA
PLCD6 PLCD5 PLCD4 PLCD3 PLCD2 PLCD1
PK
HTM
12Bit TIMER
PA
PB
TIMING CONTROL
COMMON
PH
SYNC RESET OSCI OSCO VDD GND

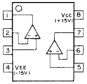
NJM2041M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —


Vcc (+15V)
VEE (-15V)

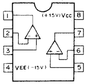
NJM2043M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



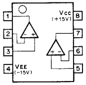
NJM2903D (JRC)
NJM2903M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —


Vcc (+15V)
VEE (-15V)

NJM4558M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —

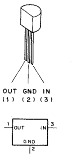

(+15V) Vcc
VEE (-15V)

NJM4560M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —


Vcc (+15V)
VEE (-15V)

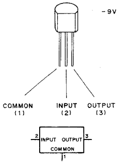
NJM78L ? ?A (JRC)
POSITIVE VOLTAGE REGULATOR (40mA)

9V NJM78L09A

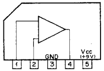

OUT GND IN
(1) (2) (3)
OUT
IN
GND

NJM79L ? ?A (JRC)
NEGATIVE VOLTAGE REGULATOR (40mA)
— FRONT VIEW —

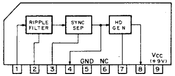
-9V NJM79L09A


COMMON (1)
INPUT (2)
OUTPUT (3)
INPUT OUTPUT
COMMON

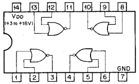
TA7060P (TOSHIBA)
LINEAR AMP
— SIDE VIEW —

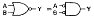


TA7357AP (TOSHIBA)
SYNC SEPARATOR/HD PULSE GENERATOR
— SIDE VIEW —


RIPPLE FILTER
SYNC SEP
HD GEN
GND NC
Vcc (+9V)

TC4001BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7

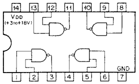


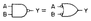
$Y = \overline{A+B} = \overline{A}\cdot\overline{B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TC4011BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7

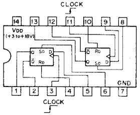


$Y = \overline{A\cdot B} = \overline{A}+\overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

TC4013BF (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —


CLOCK
14 13 12 11 10 9 8
VDD (+3 to +18V)
SD
RD
Q
D
GND
1 2 3 4 5 6 7
CLOCK

DIRECT R-S FLIP FLOP

SD	RD	Q	$\overline{Q}$
0	0	Qn	$\overline{Qn}$
0	1	0	1
1	0	1	0
1	1	0	1

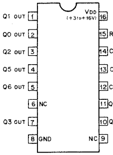
D-TYPE FLIP FLOP

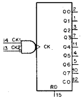
CKn	CKn+1
D	Q
0	0
1	1

CLOCK CK; ⌐
CKn; BEFORE CLOCK
CKn+1; AFTER CLOCK

0; LOW LEVEL
1; HIGH LEVEL

TC4022BP (TOSHIBA)
C-MOS OCTAL COUNTER/DIVIDER
— TOP VIEW —

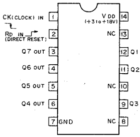

Q1 OUT 1
Q0 OUT 2
Q2 OUT 3
Q5 OUT 4
Q6 OUT 5
6 NC
Q3 OUT 7
8 GND
VDD (+3 to +16V) 16
15 RD
14 CK1(CLOCK) IN
13 CK2(CLOCK) IN
12 CO (CARRY OUT)
11 Q4 OUT
10 Q7 OUT
NC 9

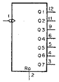

14 CK1
13 CK2
CK
O0 2
O1 1
O2 3
O3 7
O4 11
O5 4
O6 5
O7 10
CO 12
RD
15

COUNT	INPUTS		OUTPUTS								
	RD	CK=CK1·$\overline{CK2}$	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0	CO
0	1	X	0	0	0	0	0	0	0	1	1
0	0	⌐	0	0	0	0	0	0	0	1	1
1	0	⌐	0	0	0	0	0	0	1	0	1
2	0	⌐	0	0	0	0	0	1	0	0	1
3	0	⌐	0	0	0	0	1	0	0	0	1
4	0	⌐	0	0	0	1	0	0	0	0	0
5	0	⌐	0	0	1	0	0	0	0	0	0
6	0	⌐	0	1	0	0	0	0	0	0	0
7	0	⌐	1	0	0	0	0	0	0	0	0
NO COUNT	0	1	NO CHANGE								
	0	0									

1: HIGH
0: LOW
X: DON'T CARE

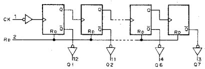
TC4024BF (TOSHIBA) FLAT PACKAGE
C-MOS ASYNCHRONOUS 7-BIT BINARY COUNTER
— TOP VIEW —


CK (CLOCK) IN 1
RD IN (DIRECT RESET) 2
Q7 OUT 3
Q6 OUT 4
Q5 OUT 5
Q4 OUT 6
7 GND
VDD (+3 to +18V) 14
NC 13
12 Q1 OUT
11 Q2 OUT
NC 10
9 Q3 OUT
NC 8

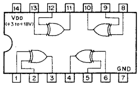

1
Q1 12
Q2 11
Q3 9
Q4 6
Q5 5
Q6 4
Q7 3
RD
2

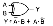
COUNT	INPUTS		OUTPUTS						
	CK	RD	Q7	Q6	Q5	Q4	Q3	Q2	Q1
0	X	1	0	0	0	0	0	0	0
1	⌐	0	0	0	0	0	0	0	1
2	⌐	0	0	0	0	0	0	1	0
3	⌐	0	0	0	0	0	0	1	1
4	⌐	0	0	0	0	0	1	0	0
125	⌐	0	1	1	1	1	1	0	1
126	⌐	0	1	1	1	1	1	1	0
127	⌐	0	1	1	1	1	1	1	1
—	0	0	NO CHANGE						
—	1	0							

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE


CK 1
RD 2
Q
RD
Q1
Q2
Q6
Q7

TC4030BF (TOSHIBA) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7

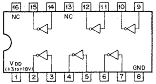


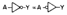
$Y = \overline{A}\cdot B + A\cdot\overline{B}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

TC4049BF (TOSHIBA) FLAT PACKAGE
C-MOS INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —


16 15 14 13 12 11 10 9
NC
NC
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7 8

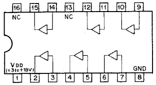


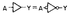
$Y = \overline{A}$

A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

TC4050BF (TOSHIBA) FLAT PACKAGE
C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —

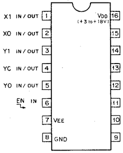

16 15 14 13 12 11 10 9
NC
NC
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7 8

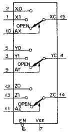


$Y = A$

A	Y
0	0
1	1

TC4053BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

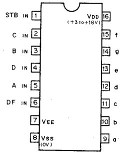

X1 IN / OUT 1
X0 IN / OUT 2
Y1 IN / OUT 3
YC IN / OUT 4
Y0 IN / OUT 5
EN IN 6
7 VEE
8 GND
VDD (+3 to +18V) 16
15 XC IN / OUT
14 ZC IN / OUT
13 Z1 IN / OUT
12 Z0 IN / OUT
11 AZ IN / OUT
10 AX IN / OUT
9 AY IN / OUT

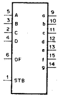

2 X0
1 X1
XC 15
OPEN
10 AX
5 Y0
3 Y1
YC 4
OPEN
9 AY
12 Z0
13 Z1
ZC 14
OPEN
11 AZ
EN
VEE
6
7

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

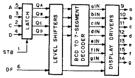
CONT. INPUTS		ON CHANNEL
EN	A (X,Y,Z,)	
0	0	0
0	1	1
1	X	OPEN

TC4056BF (TOSHIBA) FLAT PACKAGE
C-MOS BCD TO 7-SEGMENT DECODER/LIQUID-CRYSTAL DISPLAY DRIVERS WITH STROBED-LATCH FUNCTION
— TOP VIEW —

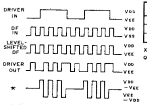

STB IN 1
C IN 2
B IN 3
D IN 4
A IN 5
DF IN 6
7 VEE
8 VSS (0V)
VDD (+3 to +18V) 16
15 f OUT
14 g OUT
13 e OUT
12 d OUT
11 c OUT
10 b OUT
9 a OUT


5 A
3 B
2 C
4 D
6 DF
1 STB
a 9
b 10
c 11
d 12
e 13
f 15
g 14

DF; DISPLAY FREQUENCY
STB; STROBE


A 5
B 3
C 2
D 4
LATCH
QA
QB
QC
QD
STB 1
DF 6
LEVEL SHIFTERS
BCD TO 7-SEGMENT DECODER
aIN
bIN
cIN
dIN
eIN
fIN
gIN
DISPLAY DRIVERS
9 a
10 b
11 c
12 d
13 e
15 f
14 g

TIMING CHART



* RESULTANT LIQUID-CRYSTAL SEGMENT WAVEFORM IF LEVEL-SHIFTED DF IS APPLIED TO LIQUID-CRYSTAL COMMON LINE.

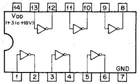
INPUT				OUTPUT							DISPLAY	DECIMAL
A	B	C	D	a	b	c	d	e	f	g		
0	0	0	0	1	1	1	1	1	1	0	0	0
0	0	0	1	0	1	1	0	0	0	0	1	1
0	0	1	0	1	1	0	1	1	0	1	2	2
0	0	1	1	1	1	1	1	0	0	1	3	3
0	1	0	0	0	1	1	0	0	1	1	4	4
0	1	0	1	1	0	1	1	0	1	1	5	5
0	1	1	0	1	0	1	1	1	1	1	6	6
0	1	1	1	1	1	1	0	0	0	0	7	7
1	0	0	0	1	1	1	1	1	1	1	8	8
1	0	0	1	1	1	1	1	0	1	1	9	9
1	0	1	0	0	0	0	1	1	1	0	L	10
1	0	1	1	0	1	1	0	1	1	1	H	11
1	1	0	0	1	1	0	0	1	1	1	P	12
1	1	0	1	1	1	1	0	1	1	1	A	13
1	1	1	0	0	0	0	0	0	0	1	–	14
1	1	1	1	0	0	0	0	0	0	0	BLANK	15

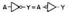
FUNCTION TABLE

STB	INPUT (A,B,C,D)	LATCH OUTPUT (QA,QB,QC,QD)
1	1	1
1	0	0
0	X	Q0

X; DON'T CARE
Q0; THE LEVEL OF QN BEFORE THE HIGH TO LOW TRANSITION OF STROBE.

TC4069UBF (TOSHIBA) FLAT PACKAGE
C-MOS INVERTER
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7

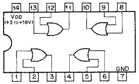


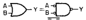
$Y = \overline{A}$

A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

TC4071BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT OR GATE
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7

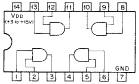


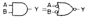
$Y = A + B = \overline{\overline{A}\cdot\overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

TC4081BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT AND GATE
— TOP VIEW —


14 13 12 11 10 9 8
VDD (+3 to +15V)
GND
1 2 3 4 5 6 7

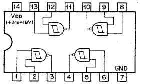


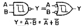
$Y = A\cdot B = \overline{\overline{A}+\overline{B}}$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

TC4093BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND SCHMITT TRIGGER
— TOP VIEW —

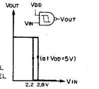

14 13 12 11 10 9 8
VDD (+3 to +18V)
GND
1 2 3 4 5 6 7



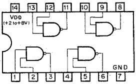
$Y = \overline{A\cdot B} = \overline{A}+\overline{B}$

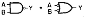
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL



TC40H000F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+2 to +8V)
GND
1
2
3
4
5
6
7

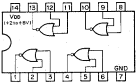


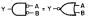
$Y = \overline{A \cdot B} = \bar{A} + \bar{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TC40H002F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
— TOP VIEW —


14
13
12
11
10
9
8
VDD
(+2 to +8V)
GND
1
2
3
4
5
6
7

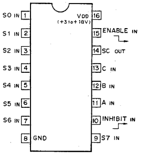


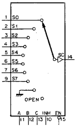
$Y = \overline{A + B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

TC4512BF (TOSHIBA) FLAT PACKAGE
C-MOS 8-CHANNEL DATA SELECTOR/MULTIPLEXER
— TOP VIEW —

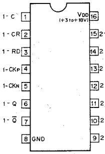

S0 IN 1
S1 IN 2
S2 IN 3
S3 IN 4
S4 IN 5
S5 IN 6
S6 IN 7
8 GND
VDD 16
(+3 to +18V)
15 ENABLE IN
14 SC OUT
13 C IN
12 B IN
11 A IN
10 INHIBIT IN
9 S7 IN

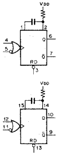

1 S0
2 S1
3 S2
4 S3
5 S4
6 S5
7 S6
9 S7
OPEN
SC
14
A
B
C
INH
EN
11
12
13
10
15

CONTROL INPUTS					OUTPUT
EN	INH	C	B	A	SC
0	0	0	0	0	S0
0	0	0	0	1	S1
0	0	0	1	0	S2
0	0	0	1	1	S3
0	0	1	0	0	S4
0	0	1	0	1	S5
0	0	1	1	0	S6
0	0	1	1	1	S7
0	1	X	X	X	GND
1	X	X	X	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

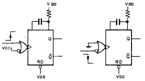
TC4538BF (TOSHIBA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE
MONOSTABLE MULTIVIBRATOR
— TOP VIEW —


1-C 1
1-CR 2
1-RD 3
1-CKP 4
1-CKN 5
1-Q 6
1-Q̄ 7
8 GND
VDD 16
(+3 to +18V)
15 2-C
14 2-CR
13 2-RD
12 2-CKP
11 2-CKN
10 2-Q
9 2-Q̄

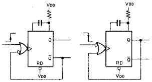

VDD
1
2
4
5
Q
6
Q̄
7
RD
3
VDD
15
14
12
11
Q
10
Q̄
9
RD
13

OUTPUT PULSE WIDTH=CR

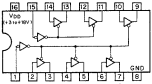
RETRIGGERABLE M.M.V


VDD
VDD
Q
Q̄
RD
VDD
VDD
Q
Q̄
RD
VDD

NON-RETRIGGERABLE M.M.V

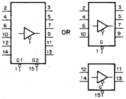

VDD
VDD
Q
Q̄
RD
VDD
Q
Q̄
RD
VDD

TC5012BF (TOSHIBA) FLAT PACKAGE
C-MOS NON-INVERTING 3-STATE BUFFER
— TOP VIEW —

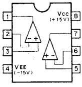

16
15
14
13
12
11
10
9
VDD
(+3 to +18V)
GND
1
2
3
4
5
6
7
8

G	A	Y
0	0	0
0	1	1
1	X	HI-Z

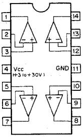
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE


2
4
6
10
12
14
3
5
7
9
11
13
G1
G2
1
15
OR
2
4
6
10
3
5
7
9
G
1
12
14
11
13
G
15

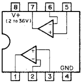
TL082CP (TI)
TL082CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —


1
2
3
4
VEE
(-15V)
Vcc
(+15V)
8
7
6
5
-
+
+
-

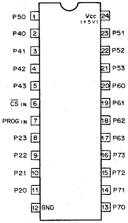
uPC324G2 (NEC) FLAT PACKAGE
QUAD. OP AMPLIFIER
— TOP VIEW —

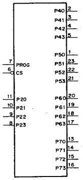

1
2
3
4
5
6
7
14
13
12
11
10
9
8
Vcc
(+3 to +30V)
GND
−
+

uPC393G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —


8
7
6
5
V+
(2 to 36V)
GND
1
2
3
4
−
+

uPD82C43G (NEC) FLAT PACKAGE
N-MOS I/O PORT EXPANDER
— TOP VIEW —

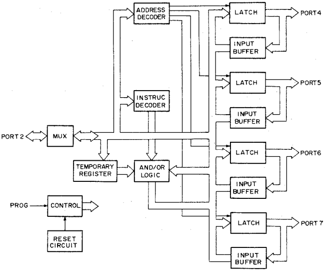

P50 1
P40 2
P41 3
P42 4
P43 5
$\overline{CS}$ IN 6
PROG IN 7
P23 8
P22 9
P21 10
P20 11
12 GND
Vcc (+5V) 24
23 P51
22 P52
21 P53
20 P60
19 P61
18 P62
17 P63
16 P73
15 P72
14 P71
13 P70

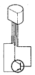

7 PROG
6 CS
11 P20
10 P21
9 P22
8 P23
P40 2
P41 3
P42 4
P43 5
P50 1
P51 23
P52 22
P53 21
P60 20
P61 19
P62 18
P63 17
P70 13
P71 14
P72 15
P73 16

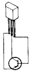
CONTROL AND PORT ADDRESSING

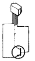
P23	P22	P21	P20	PORT	CONTROL
0	0	0	0	4	READ
0	0	0	1	5	
0	0	1	0	6	
0	0	1	1	7	
0	1	0	0	4	WRITE
0	1	0	1	5	
0	1	1	0	6	
0	1	1	1	7	
1	0	0	0	4	OR
1	0	0	1	5	
1	0	1	0	6	
1	0	1	1	7	
1	1	0	0	4	AND
1	1	0	1	5	
1	1	1	0	6	
1	1	1	1	7	

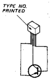
PROG ; PROGRAM PULSE INPUT
$\overline{CS}$; CHIP SELECT INPUT
P20~P23 ; I/O PORT 2 (FOR CPU)
P40~P43 ; I/O PORT 4
P50~P53 ; I/O PORT 5
P60~P63 ; I/O PORT 6
P70~P73 ; I/O PORT 7


ADDRESS DECODER
INSTRUC DECODER
PORT 2
MUX
TEMPORARY REGISTER
AND/OR LOGIC
PROG
CONTROL
RESET CIRCUIT
LATCH
INPUT BUFFER
PORT4
LATCH
INPUT BUFFER
PORT5
LATCH
INPUT BUFFER
PORT6
LATCH
INPUT BUFFER
PORT 7

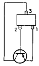

2SA1005


2SA1026
2SA1027R

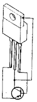

2SA1115

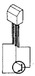

TYPE NO. PRINTED
2SA1175

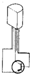
TOP VIEW (SCALE 4/1)

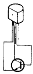


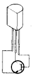
2SA812


2SB553
2SB825
2SB856

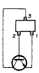

2SB733


2SB739

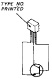

2SC1318
2SC1364
2SC1633
2SC1634
2SC2878
2SC945

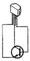

2SC1475
2SD788
2SD789

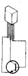
TOP VIEW (SCALE 4/1)

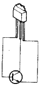


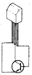
2SC1623

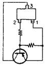

TYPE NO. PRINTED
2SC2785


2SC403SP


2SC633A
2SC634A

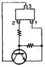

2SD1160


2SD774



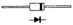
DTA114YK
DTA144EK

TOP VIEW (SCALE 4/1)

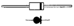


DTC114EK
DTC114YK
DTC144EK

DIODE/OTHER

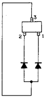


10E-2
1S1555
1S1555S
1SS119



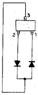
10YD ? ?

TOP VIEW (SCALE 4/1)



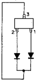
1S2835

TOP VIEW (SCALE 4/1)

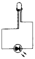


1SS123

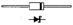
TOP VIEW (SCALE 4/1)



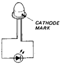
1S2837



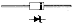
BR5505S



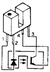
ERA81-004
ERB81-004


CATHODE MARK

KL-1



RD ? ?EB
RD ? ?FB

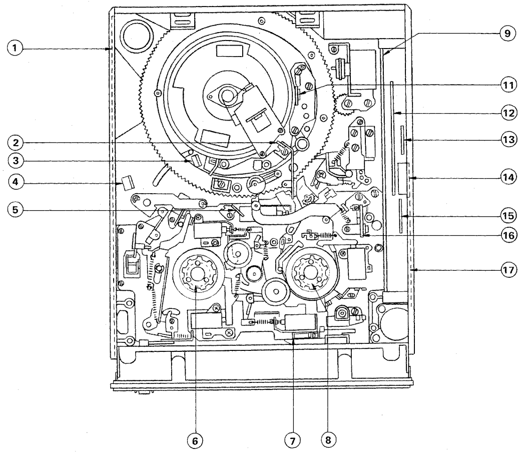


TLP801A

SECTION 14
PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

LOCATION OF THE PRINTED CIRCUIT BOARD

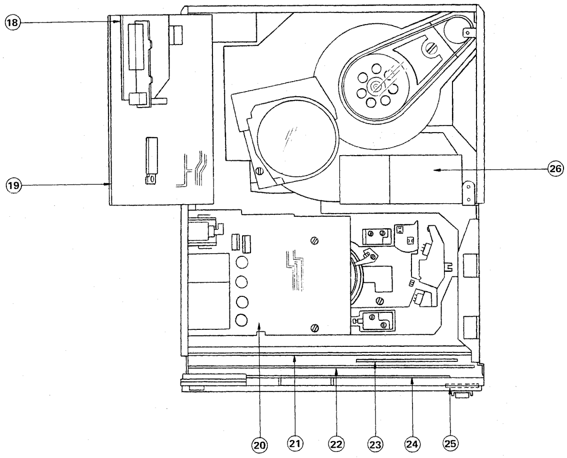
< TOP VIEW >



① SV-57 Board
② DUS-5 Board
③ DUS-5 Board
④ LE-20 Board
⑤ LE-21 Board
⑥ PC-22 Board
⑦ TM-19 Board
⑧ PC-22 Board
⑨ AU-49 Board

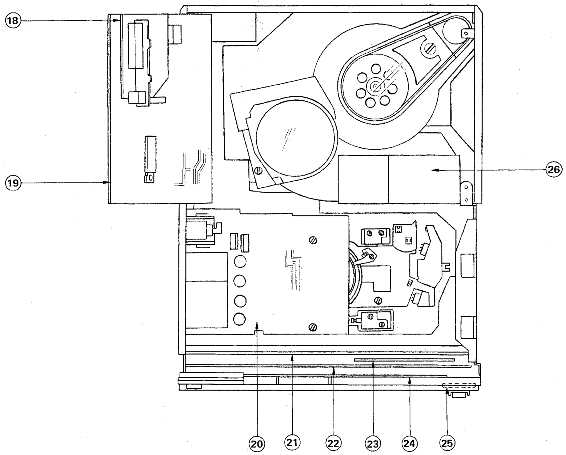
⑩ SW-61 Board
⑪ DU-58 Board
⑫ CM-19 Board
⑬ DU-79 Board
⑭ DUS-6 Board
⑮ DUS-3 Board
⑯ DUS-4 Board
⑰ AU-51 Board

< BOTTOM VIEW >



⑱ YC-24 Board
⑲ VO-11 Board (with DUS-22 Board)
⑳ PS-42 Board
㉑ SY-22 Board
㉒ SY-18 Board (with DUS-33 Board)
㉓ SY-23 Board (with DUS-37 Board)
㉔ KY-53 Board
㉕ SW-29 Board
㉖ RP-16 Board

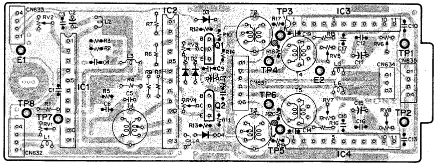
< BOTTOM VIEW >



⑱ YC-24 Board
⑲ VO-11 Board (with DUS-22 Board)
⑳ PS-42 Board
㉑ SY-22 Board
㉒ SY-18 Board (with DUS-33 Board)
㉓ SY-23 Board (with DUS-37 Board)
㉔ KY-53 Board
㉕ SW-29 Board
㉖ RP-16 Board

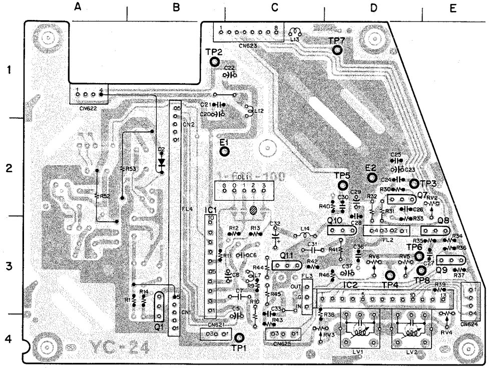
RP-16 (VIDEO REC/PB RF AMP)
YC-24 (VIDEO PB RF AMP)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


CN633
CN632
CN634
CN635
IC1
IC2
IC3
IC4
T1
T2
T3
T4
T5
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
E1
E2
Q1
Q2
D3
D4
RV1
RV2
RV3
RV4
RV5
RV6
RV7
RV8

RP-16 -SOLDERING SIDE-
1-611-952-11
VO-6800

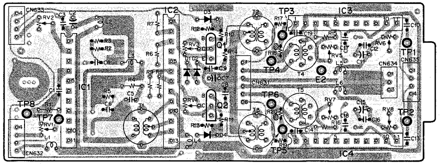
CN1	B - 3	TP1	C - 4
CN2	B - 2	TP2	B - 1
CN621	B - 4	TP3	D - 2
CN622	A - 1	TP4	D - 3
CN623	C - 1	TP5	D - 2
CN624	E - 3	TP6	D - 3
CN625	C - 4	TP7	D - 1
		TP8	E - 3
D2	B - 2		
DL1	C - 2		
E1	C - 2		
E2	D - 2		
FL2	D - 3		
FL3	C - 3		
FL4	B - 2		
IC1	B - 3		
IC2	D - 3		
LV1	D - 4		
LV2	D - 4		
Q1	B - 3		
Q7	D - 2		
Q8	E - 3		
Q9	E - 3		
Q10	D - 3		
Q11	C - 3		
RV2	E - 2		
RV3	C - 4		
RV4	E - 4		
RV5	D - 3		
RV6	D - 3		


A
B
C
D
E
1
2
3
4
CN622
CN623
CN2
CN1
CN621
CN625
CN624
1-613-100
YC-24
IC1
IC2
FL2
FL3
FL4
DL1
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
E1
E2
Q1
Q7
Q8
Q9
Q10
Q11
LV1
LV2
RV3
RV4
RV5
RV6

YC-24 -SOLDERING SIDE-
1-613-100-11
VO-6800

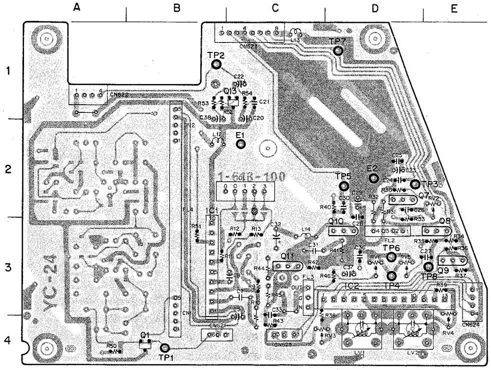
14-3 (a)

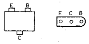
S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)


CN633
CN632
CN634
CN635
IC1
IC2
IC3
IC4
T1
T2
T3
T4
T5
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
E2
Q1
Q2
D3
D4
RV2
RV3
RV4
RV6
RV7
RV8

RP-16 -SOLDERING SIDE-
1-611-952-12
VO-6800------RP-16
VO-6800PS----RP-16A

CN1	B - 3	RV2	E - 2
CN2	B - 2	RV3	C - 4
CN621	B - 4	RV4	E - 4
CN622	A - 1	RV5	D - 3
CN623	C - 1	RV6	D - 3
CN624	E - 3		
CN625	C - 4	TP1	B - 4
		TP2	B - 1
DL1	C - 2	TP3	D - 2
		TP4	D - 3
E1	C - 2	TP5	D - 2
E2	D - 2	TP6	D - 3
		TP7	D - 1
FL2	D - 3	TP8	E - 3
FL3	C - 3		
FL4	B - 2		
IC1	B - 3		
IC2	D - 3		
LV1	D - 4		
LV2	D - 4		
Q1	B - 4		
Q7	D - 2		
Q8	E - 3		
Q9	E - 3		
Q10	D - 3		
Q11	C - 3		
Q13	C - 1		


A
B
C
D
E
1
2
3
4
CN622
CN623
CN621
CN625
CN624
1-613-100
YC-24
IC1
IC2
FL2
FL3
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
E1
E2
Q1
Q7
Q8
Q9
Q10
Q11
Q13
LV1
LV2
RV3
RV4
RV6



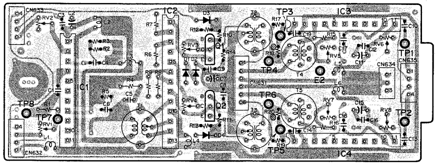
YC-24 -SOLDERING SIDE-
1-613-100-12
VO-6800

14-3 (b)

S/N
S/N

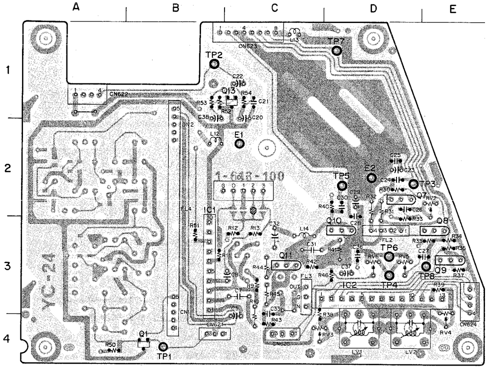
CN1	B - 3
CN2	B - 2
CN621	B - 4
CN622	A - 1
CN623	C - 1
CN624	E - 3
CN625	C - 4
E2	D - 2
FL2	D - 3
FL3	C - 3
FL4	B - 2
IC2	D - 3
LV1	D - 4
LV2	D - 4
Q1	B - 4
Q7	D - 2
Q9	E - 3
Q10	D - 3
Q11	C - 3
Q13	C - 1

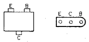
S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)


CN633
RV2
IC2
IC3
IC4
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
CN632
CN634
CN635
Q1
Q2
T4
E2

RP-16 -SOLDERING SIDE-
1-611-952-12
VO-6800------RP-16
VO-6800PS----RP-16A

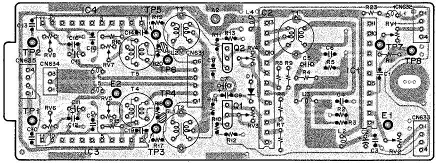
CN1	B - 3
CN2	B - 2
CN621	B - 4
CN622	A - 1
CN623	C - 1
CN624	E - 3
CN625	C - 4
DL1	C - 2
E1	C - 2
E2	D - 2
FL2	D - 3
FL3	C - 3
FL4	B - 2
IC1	B - 3
IC2	D - 3
LV1	D - 4
LV2	D - 4
Q1	B - 4
Q7	D - 2
Q8	E - 3
Q9	E - 3
Q10	D - 3
Q11	C - 3
Q13	C - 1
RV2	E - 2
RV3	C - 4
RV4	E - 4
RV5	D - 3
RV6	D - 3
TP1	B - 4
TP2	B - 1
TP3	D - 2
TP4	D - 3
TP5	D - 2
TP6	D - 3
TP7	D - 1
TP8	E - 3


A
B
C
D
E
1
2
3
4
YC-24
1-613-100
CN622
CN623
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
E1
E2
IC1
IC2
Q1
Q7
Q8
Q9
Q10
Q11
Q13
LV1
LV2
CN621
CN624
CN625



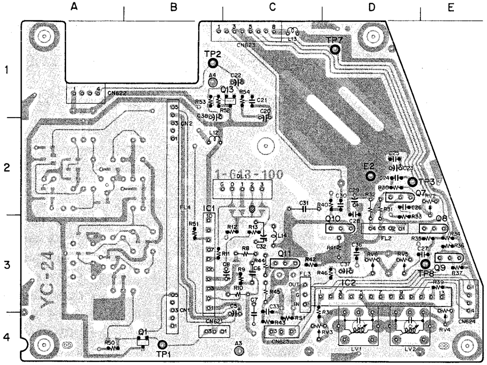
YC-24 -SOLDERING SIDE-
1-613-100-12
VO-6800

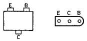
S/N 12781 AND LATER (UC)
S/N 10561 AND LATER (J)


IC4
IC3
IC1
IC2
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
E1
E2
CN633
CN634
CN635
Q1
Q2

RP-16 -SOLDERING SIDE-
1-611-952-13,14
VO-6800
VO-6800PS

CN1	B - 3
CN2	B - 2
CN621	B - 4
CN622	A - 1
CN623	C - 1
CN624	E - 3
CN625	C - 4
E2	D - 2
FL2	D - 3
FL3	C - 3
FL4	B - 2
IC2	D - 3
LV1	D - 4
LV2	D - 4
Q1	B - 4
Q7	D - 2
Q9	E - 3
Q10	D - 3
Q11	C - 3
Q13	C - 1
RV2	E - 2
RV3	C - 4
RV4	E - 4
RV5	D - 3
RV6	D - 3
TP1	B - 4
TP2	B - 1
TP3	D - 2
TP7	D - 1
TP8	E - 3


A
B
C
D
E
1
2
3
4
YC-24
1-613-100
CN622
CN623
TP1
TP2
TP3
TP7
TP8
E2
IC1
IC2
Q1
Q7
Q8
Q9
Q10
Q11
Q13
A3
A4
LV1
LV2
CN621
CN624
CN625

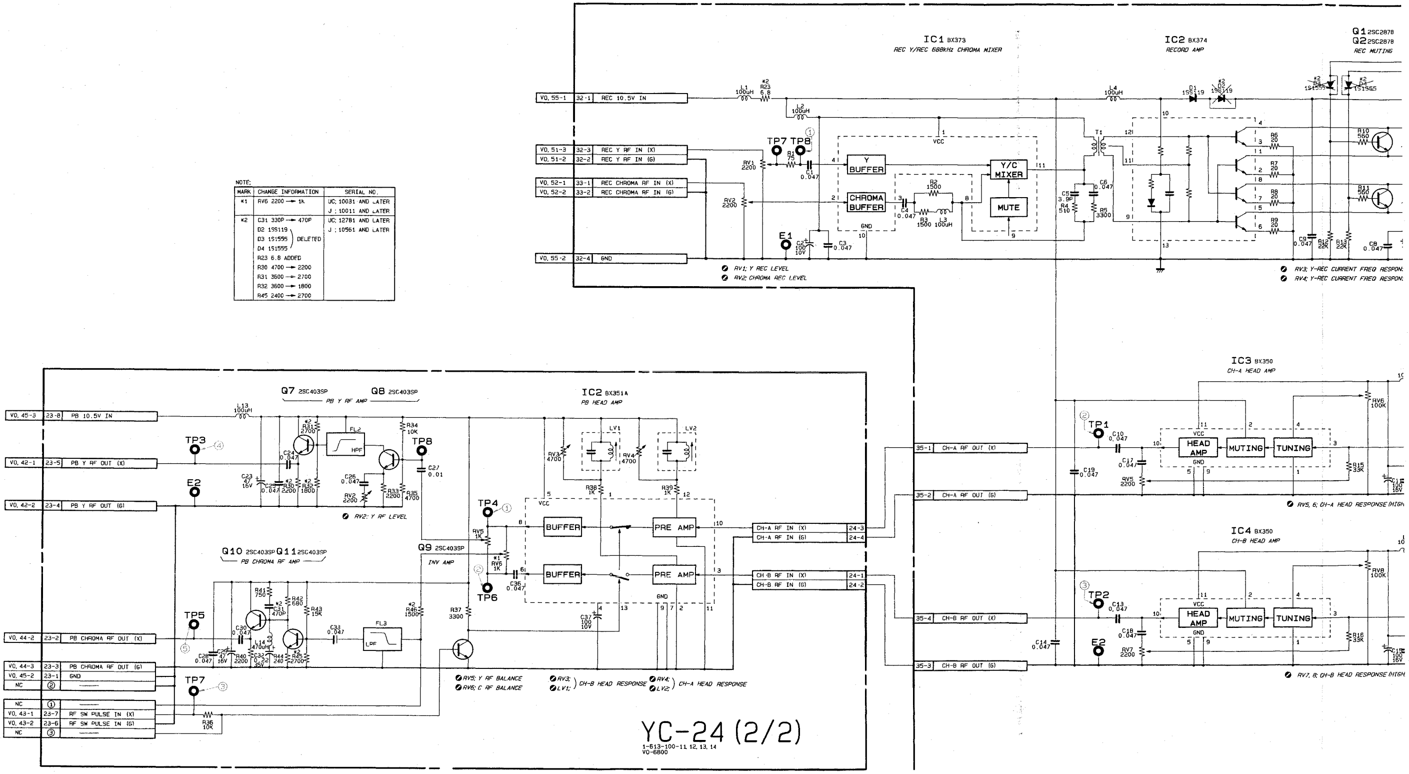


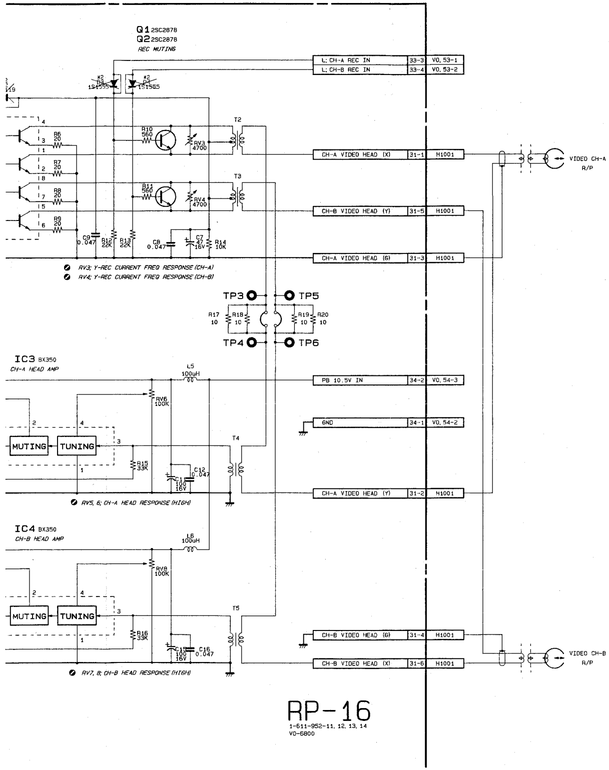
YC-24 -SOLDERING SIDE-
1-613-100-14
VO-6800

RP-16 (VIDEO REC/PB RF AMP)
YC-24 (2/2) (VIDEO PB RF AMP)

NOTE;

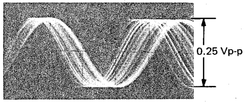
MARK	CHANGE INFORMATION	SERIAL NO.
*1	RV6 2200 → 1K	UC; 10031 AND LATER J ; 10011 AND LATER
*2	C31 330P → 470P D2 1SS119 ⎫ D3 1S1555 ⎬ DELETED D4 1S1555 ⎭ R23 6.8 ADDED R30 4700 → 2200 R31 3600 → 2700 R32 3600 → 1800 R45 2400 → 2700	UC; 12781 AND LATER J ; 10561 AND LATER


IC1 BX373
REC Y/REC 688kHz CHROMA MIXER
IC2 BX374
RECORD AMP
Q1 2SC2878
Q2 2SC2878
REC MUTING
VO, 55-1 | 32-1 | REC 10.5V IN
VO, 51-3 | 32-3 | REC Y RF IN (X)
VO, 51-2 | 32-2 | REC Y RF IN (G)
VO, 52-1 | 33-1 | REC CHROMA RF IN (X)
VO, 52-2 | 33-2 | REC CHROMA RF IN (G)
VO, 55-2 | 32-4 | GND
L1 100uH
*2 R23 6.8
L2 100uH
TP7
TP8
RV1 2200
R1 75
C1 0.047
RV2 2200
Y BUFFER
CHROMA BUFFER
Y/C MIXER
MUTE
VCC
GND
R2 1500
R3 1500
L3 100uH
C4 0.047
E1
C2 100 10V
C3 0.047
L4 100uH
D1 1SS119
*2 D2 1SS119
*2 D3 1S1555
*2 D4 1S1555
T1
C5 3.9P
R4 510
C6 0.047
R5 3300
R6 20
R7 20
R8 20
R9 20
R10 560
R11 560
C9 0.047
R12 22K
R13 22K
C8 0.047
RV1; Y REC LEVEL
RV2; CHROMA REC LEVEL
RV3; Y-REC CURRENT FREQ RESPON
RV4; Y-REC CURRENT FREQ RESPON
IC3 BX350
CH-A HEAD AMP
IC4 BX350
CH-B HEAD AMP
TP1
TP2
E2
C10 0.047
C13 0.047
C17 0.047
C18 0.047
C19 0.047
C14 0.047
RV5 2200
RV7 2200
RV6 100K
RV8 100K
R15 33K
R16 33K
HEAD AMP
MUTING
TUNING
35-1 | CH-A RF OUT (X)
35-2 | CH-A RF OUT (G)
35-4 | CH-B RF OUT (X)
35-3 | CH-B RF OUT (G)
RV5, 6; CH-A HEAD RESPONSE (HIGH
RV7, 8; CH-B HEAD RESPONSE (HIGH
Q7 2SC403SP
Q8 2SC403SP
PB Y RF AMP
IC2 BX351A
PB HEAD AMP
VO, 45-3 | 23-8 | PB 10.5V IN
VO, 42-1 | 23-5 | PB Y RF OUT (X)
VO, 42-2 | 23-4 | PB Y RF OUT (G)
TP3
E2
L13 100uH
*2 R31 2700
FL2
HPF
C24 0.047
C23 47 16V
C29 0.047
*2 R30 2200
*2 R32 1800
C26 0.047
RV2 2200
R33 2200
R34 10K
R35 4700
TP8
C27 0.01
RV2; Y RF LEVEL
RV3 4700
RV4 4700
LV1
LV2
R38 1K
R39 1K
TP4
RV5 1K
*1 RV6 1K
C36 0.047
TP6
BUFFER
PRE AMP
C37 100 10V
CH-A RF IN (X) | 24-3
CH-A RF IN (G) | 24-4
CH-B RF IN (X) | 24-1
CH-B RF IN (G) | 24-2
Q10 2SC403SP
Q11 2SC403SP
PB CHROMA RF AMP
Q9 2SC403SP
INV AMP
TP5
R41 750
*2 C31 470P
R42 680
R43 15K
C30 0.047
L14 470uH
C33 0.047
FL3
LPF
C28 0.047
C22 47 16V
R40 2200
C32 0.22 35V
R44 240
*2 R45 2700
*2 R46 1500
R37 3300
VO, 44-2 | 23-2 | PB CHROMA RF OUT (X)
VO, 44-3 | 23-3 | PB CHROMA RF OUT (G)
VO, 45-2 | 23-1 | GND
NC | ②
NC | ①
VO, 43-1 | 23-7 | RF SW PULSE IN (X)
VO, 43-2 | 23-6 | RF SW PULSE IN (G)
NC | ③
TP7
R36 10K
RV5; Y RF BALANCE
RV6; C RF BALANCE
RV3; LV1;) CH-B HEAD RESPONSE
RV4; LV2;) CH-A HEAD RESPONSE
YC-24 (2/2)
1-613-100-11, 12, 13, 14
VO-6800

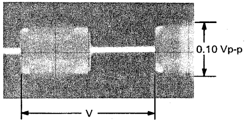

Q1 2SC2878
Q2 2SC2878
REC MUTING
L; CH-A REC IN 33-3 VO, 53-1
L; CH-B REC IN 33-4 VO, 53-2
1S1555
R10 560
RV3 4700
T2
R11 560
RV4 4700
T3
R6 20
R7 20
R8 20
R9 20
C9 0.047
R12 22K
R13 22K
C8 0.047
C7 47 16V
R14 10K
CH-A VIDEO HEAD (X) 31-1 H1001
CH-B VIDEO HEAD (Y) 31-5 H1001
CH-A VIDEO HEAD (G) 31-3 H1001
VIDEO CH-A R/P
RV3; Y-REC CURRENT FREQ RESPONSE (CH-A)
RV4; Y-REC CURRENT FREQ RESPONSE (CH-B)
TP3
TP5
TP4
TP6
R17 10
R18 10
R19 10
R20 10
IC3 BX350
CH-A HEAD AMP
L5 100uH
PB 10.5V IN 34-2 VO, 54-3
RV6 100K
GND 34-1 VO, 54-2
MUTING
TUNING
R15 33K
T4
C11 100 16V
C12 0.047
CH-A VIDEO HEAD (Y) 31-2 H1001
RV5, 6; CH-A HEAD RESPONSE (HIGH)
IC4 BX350
CH-B HEAD AMP
L6 100uH
RV8 100K
MUTING
TUNING
R16 33K
T5
C15 100 16V
C16 0.047
CH-B VIDEO HEAD (G) 31-4 H1001
CH-B VIDEO HEAD (X) 31-6 H1001
VIDEO CH-B R/P
RV7, 8; CH-B HEAD RESPONSE (HIGH)
RP-16
1-611-952-11, 12, 13, 14
VO-6800

RP-16

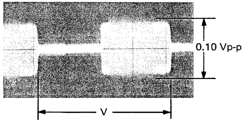
① TP8



② TP1



③ TP2

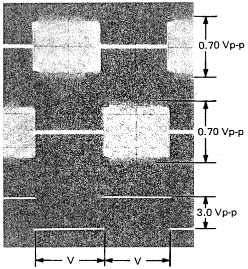


YC-24

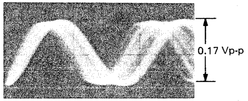
① TP4

② TP6

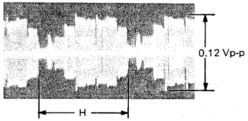
③ TP7



④ TP3



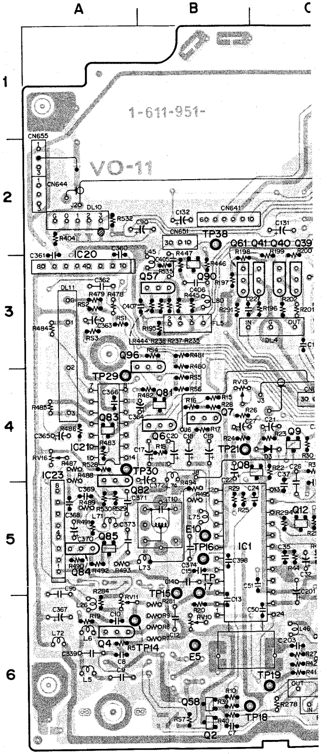
⑤ TP5

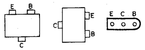


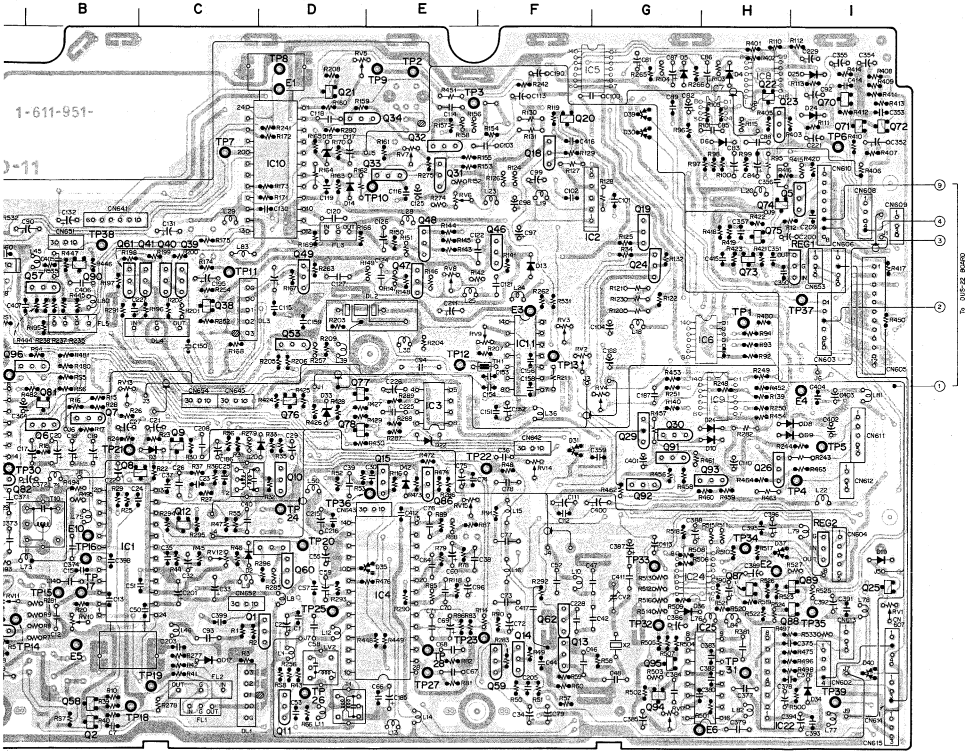
VO-11 (VIDEO REC/PB)
DUS-22

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)

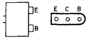
CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN607	I - 6
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 2
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 2
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D31	F - 4
D33	D - 4
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 5
D39	G - 1
D40	I - 6
D42	E - 5
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	D - 1
E2	H - 5
E3	F - 3
E4	I - 4
E5	B - 6
E6	H - 6
E10	B - 5
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC20	A - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
Q1	D - 6
Q2	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q11	D - 6
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q60	D - 5
Q61	B - 3
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q76	D - 4
Q77	D - 4
Q78	D - 4
Q81	B - 4
Q82	A - 5
Q83	A - 4
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	I - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
Q96	B - 3
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP6	I - 2
TP7	C - 2
TP8	D - 1
TP9	E - 1
TP10	E - 2
TP11	C - 3
TP12	E - 3
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP18	B - 6
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP32	G - 6
TP33	G - 5
TP34	H - 5
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6

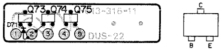

A
B
C
1
2
3
4
5
6
1-611-951-
VO-11
CN655
CN644
DL10
CN641
CN651
TP38
IC20
Q57
Q90
Q61
Q41
Q40
Q39
DL11
FL5
DL4
Q96
TP29
Q81
Q83
Q7
Q6
IC21
TP21
Q9
Q8
IC23
TP30
Q82
Q85
Q84
E10
TP16
IC1
Q12
TP15
TP14
Q4
E5
TP19
Q58
TP18
Q2




B
C
D
E
F
G
H
I
1-611-951-
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC22
IC24
IC25
REG1
REG2
To DUS-22 BOARD
①
②
③
④
⑨

VO-11-SOLDERING SIDE-
1-611-951-11
VO-6800

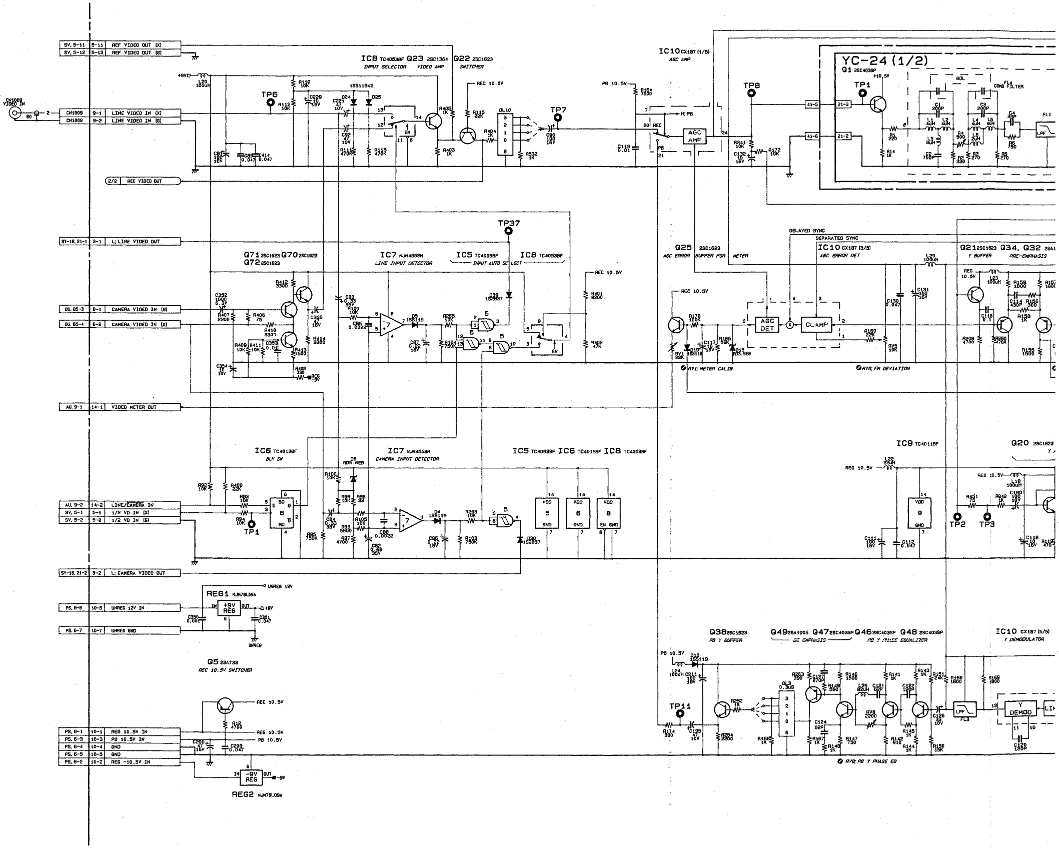


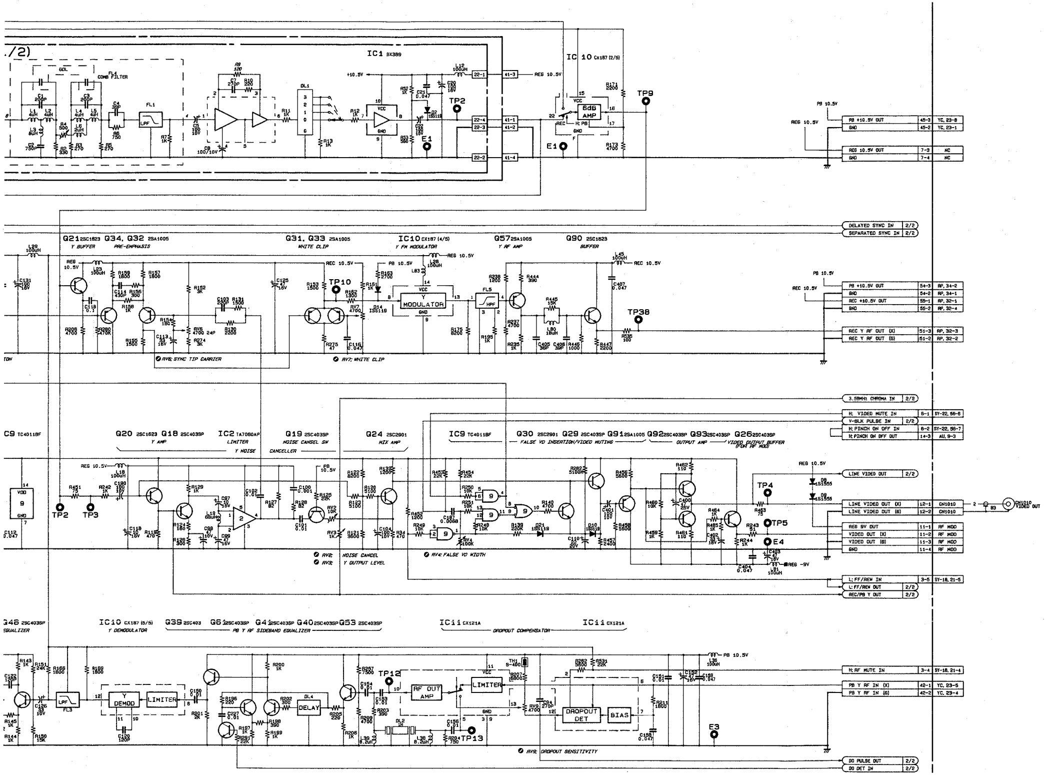

Q73 Q74 Q75
D71
1-613-316-11
DUS-22
C
B E

DUS-22-SOLDERING SIDE-
1-613-316-11
VO-6800

VO-11 (1/2) (Y MOD/DEMOD)
DUS-22
YC-24 (1/2)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


REF VIDEO OUT (K)
REF VIDEO OUT (G)
LINE VIDEO IN (K)
LINE VIDEO IN (G)
REC VIDEO OUT
L: LINE VIDEO OUT
CAMERA VIDEO IN (G)
CAMERA VIDEO IN (K)
VIDEO METER OUT
LINE/CAMERA IN
1/2 VD IN (K)
1/2 VD IN (G)
L: CAMERA VIDEO OUT
UNREG 12V IN
UNREG GND
REG 10.5V IN
PB 10.5V IN
GND
REG -10.5V IN
IC8 TC4053BF INPUT SELECTOR
Q23 2SC1364 VIDEO AMP
Q22 2SC1623 SWITCHER
IC10 CX187 (1/5) AGC AMP
YC-24 (1/2)
Q1 2SC4038P
COMB FILTER
TP1
TP6
TP7
TP8
TP37
Q71 2SC1623 Q70 2SC1623
Q72 2SC1623
IC7 NJM4558M LINE INPUT DETECTOR
IC5 TC4093BF INPUT AUTO SELECT
IC8 TC4053BF
Q25 2SC1623 AGC ERROR BUFFER FOR METER
DELAYED SYNC
SEPARATED SYNC
IC10 CX187 (3/5) AGC ERROR DET
AGC DET
CLAMP
AGC AMP
RV1: METER CALIB
RV5: FM DEVIATION
Q21 2SC1623 Y BUFFER
Q34, Q32 PRE-EMPHASIS
IC6 TC4013BF BLK SW
IC7 NJM4558M CAMERA INPUT DETECTOR
IC5 TC4093BF IC6 TC4013BF IC8 TC4053BF
IC9 TC4011BF
Q20 2SC1623
TP2
TP3
REG1 NJM78L09A
+9V REG
UNREG 12V
Q5 2SA733 REC 10.5V SWITCHER
REC 10.5V
PB 10.5V
-9V REG
REG2 NJM79L09A
Q38 2SC1623 PB Y BUFFER
Q49 2SA1005 Q47 2SC4038P DE EMPHASIS
Q46 2SC4038P Q48 2SC4038P PB Y PHASE EQUALIZER
IC10 CX187 (5/5) Y DEMODULATOR
TP11
LPF
Y DEMOD
RV8: PB Y PHASE EQ

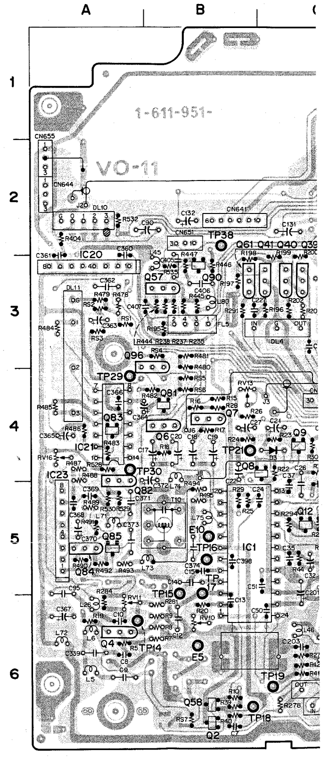

IC1 BX389
IC 10 CX187 (2/5)
6dB AMP
TP9
TP2
E1
COMB FILTER
LPF
DL1
Q21 2SC1623 Q34, Q32 2SA1005
Y BUFFER
PRE-EMPHASIS
Q31, Q33 2SA1005
WHITE CLIP
IC10 CX187 (4/5)
Y FM MODULATOR
Y MODULATOR
TP10
Q57 2SA1005
Y RF AMP
Q90 2SC1623
BUFFER
TP38
HPF
RV6: SYNC TIP CARRIER
RV7: WHITE CLIP
IC9 TC4011BF
Q20 2SC1623 Q18 2SC403SP
Y AMP
IC2 TA7060AP
LIMITER
Y NOISE
Q19 2SC403SP
NOISE CANSEL SW
CANCELLER
Q24 2SC2901
MIX AMP
IC9 TC4011BF
Q30 2SC2901 Q29 2SC403SP Q91 2SA1005 Q92 2SC403SP Q93 2SC403SP Q26 2SC403SP
FALSE VD INSERTION/VIDEO MUTING
OUTPUT AMP
VIDEO OUTPUT BUFFER (FOR RF MOD)
TP2
TP3
TP4
TP5
E4
RV2: NOISE CANCEL
RV3: Y OUTPUT LEVEL
RV4: FALSE VD WIDTH
REG 10.5V
D8 1S1555
D9 1S1555
REG -9V
Q46 2SC403SP
EQUALIZER
IC10 CX187 (5/5)
Y DEMODULATOR
Q39 2SC403 Q61 2SC403SP Q41 2SC403SP Q40 2SC403SP Q53 2SC403SP
PB Y RF SIDEBAND EQUALIZER
IC11 CX121A
DROPOUT COMPENSATOR
IC11 CX121A
LPF
Y DEMOD
LIMITER
DELAY
RF OUT AMP
LIMITER
DROPOUT DET
BIAS
TP12
TP13
E3
RV5: DROPOUT SENSITIVITY
PB 10.5V
REG 10.5V
REC 10.5V
PB +10.5V OUT | 45-3 | YC, 23-8
GND | 45-2 | YC, 23-1
REG 10.5V OUT | 7-3 | NC
GND | 7-4 | NC
DELAYED SYNC IN | 2/2
SEPARATED SYNC IN | 2/2
PB +10.5V OUT | 54-3 | RP, 34-2
GND | 54-2 | RP, 34-1
REC +10.5V OUT | 55-1 | RP, 32-1
GND | 55-2 | RP, 32-4
REC Y RF OUT (X) | 51-3 | RP, 32-3
REC Y RF OUT (G) | 51-2 | RP, 32-2
3.58MHz CHROMA IN | 2/2
H: VIDEO MUTE IN | 6-1 | SY-22, 56-6
V-BLK PULSE IN | 2/2
H: PINCH ON OFF IN | 6-2 | SY-22, 56-7
H: PINCH ON OFF OUT | 14-3 | AU, 9-3
LINE VIDEO OUT | 2/2
LINE VIDEO OUT (X) | 12-1 | CN1010
LINE VIDEO OUT (G) | 12-2 | CN1010
CN1010 VIDEO OUT
REG 9V OUT | 11-1 | RF MOD
VIDEO OUT (X) | 11-2 | RF MOD
VIDEO OUT (G) | 11-3 | RF MOD
GND | 11-4 | RF MOD
L: FF/REW IN | 3-5 | SY-18, 21-5
L: FF/REW OUT | 2/2
REC/PB Y OUT | 2/2
H: RF MUTE IN | 3-4 | SY-18, 21-4
PB Y RF IN (X) | 42-1 | YC, 23-5
PB Y RF IN (G) | 42-2 | YC, 23-4
DO PULSE OUT | 2/2
DO DET IN | 2/2

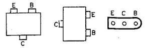
VO-11 (1/2)
Y MOD/DEMOD
1-611-951-11
VO-6800

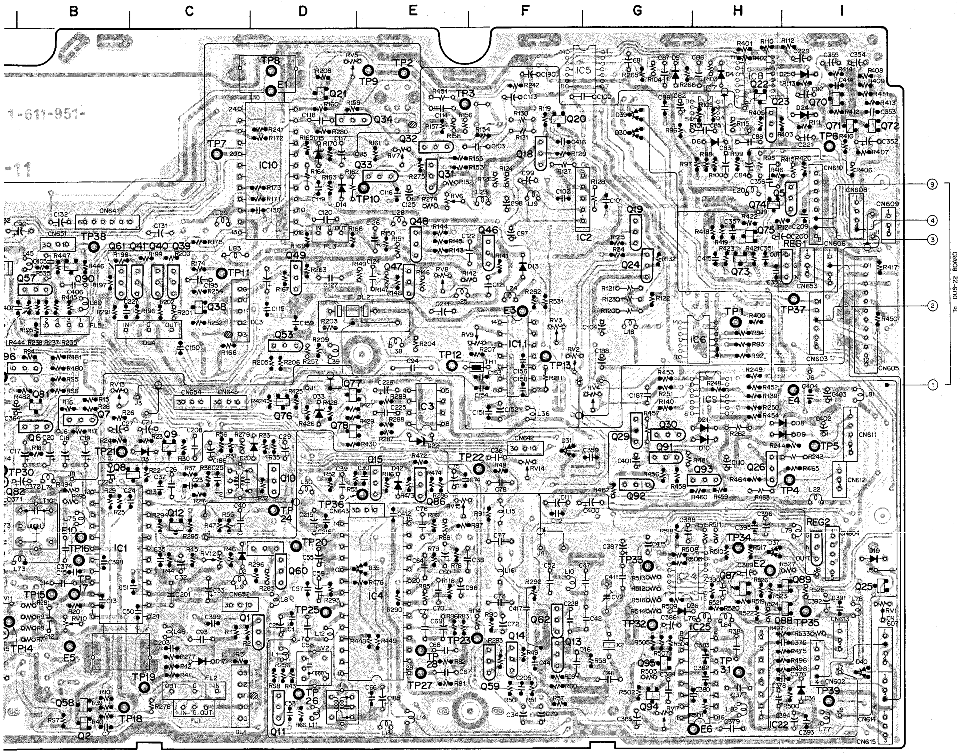
VO-11 (VIDEO REC/PB)
DUS-22

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)

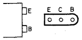
CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN607	I - 6
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 2
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 2
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D31	F - 4
D33	D - 4
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 5
D39	G - 1
D40	I - 6
D42	E - 5
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	D - 1
E2	H - 5
E3	F - 3
E4	I - 4
E5	B - 6
E6	H - 6
E10	B - 5
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC20	A - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
Q1	D - 6
Q2	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q11	D - 6
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q60	D - 5
Q61	B - 3
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q76	D - 4
Q77	D - 4
Q78	D - 4
Q81	B - 4
Q82	A - 5
Q83	A - 4
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	I - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
Q96	B - 3
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP6	I - 2
TP7	C - 2
TP8	D - 1
TP9	E - 1
TP10	E - 2
TP11	C - 3
TP12	E - 3
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP18	B - 6
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP32	G - 6
TP33	G - 5
TP34	H - 5
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6

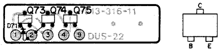

A
B
1
2
3
4
5
6
1-611-951-
VO-11
CN655
CN644
CN641
CN651
IC20
IC21
IC23
IC1
TP38
TP29
TP30
TP21
TP15
TP16
TP14
TP19
TP18
Q61 Q41 Q40
Q57
Q90
Q96
Q81
Q83
Q7
Q6
Q9
Q8
Q82
Q85
Q84
Q12
Q4
Q58
Q2
E10
E5
DL10
DL11
DL4
FL5
T10
RV1
RV13
RV16




B
C
D
E
F
G
H
I
1-611-951-
-11
To DUS-22 BOARD
①
②
③
④
⑨
IC1
IC2
IC3
IC4
IC5
IC6
IC9
IC10
IC11
IC22
IC24
IC25
REG1
REG2

VO-11 -SOLDERING SIDE-
1-611-951-11
VO-6800

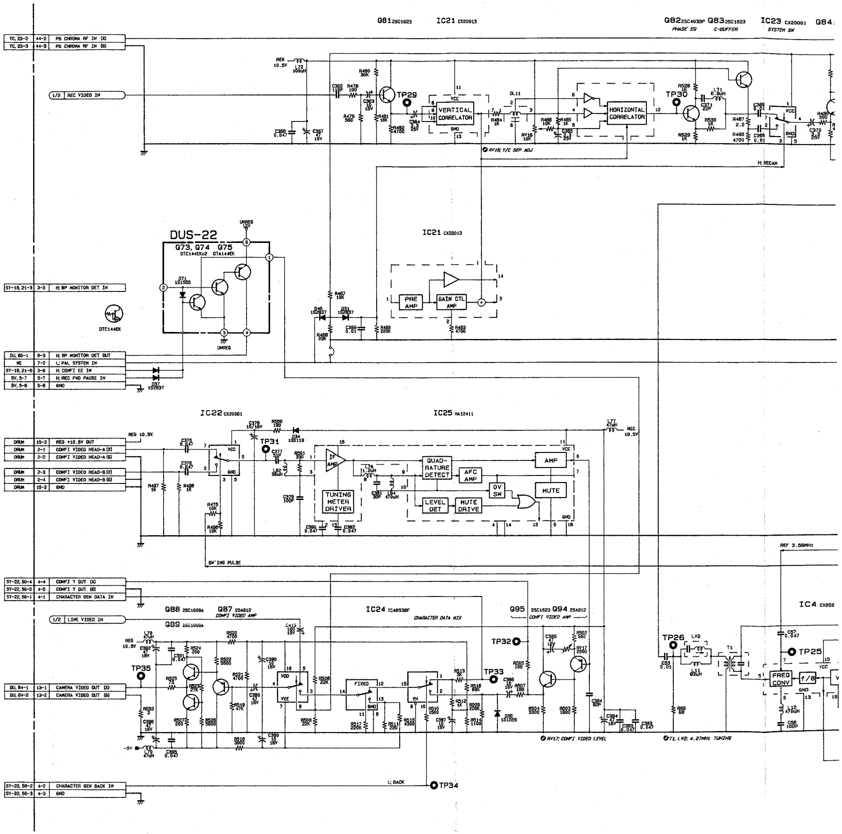


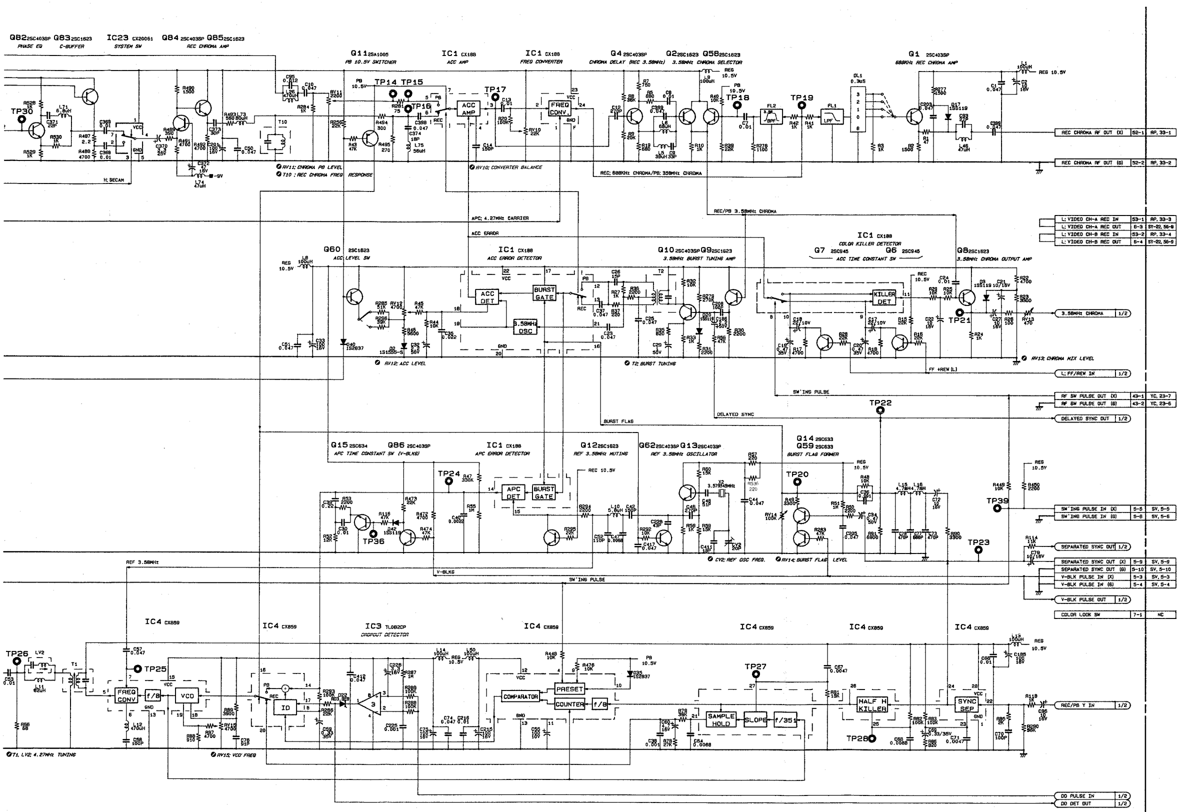

Q73 Q74 Q75
13-316-11
D71
① ② ③ ④ ⑨
DUS-22
C
B E

DUS-22 -SOLDERING SIDE-
1-613-316-11
VO-6800

VO-11 (2/2) (CHROMA MOD/DEMOD)
DUS-22

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


YC, 23-2 | 44-2 | PB CHROMA RF IN (X)
YC, 23-3 | 44-3 | PB CHROMA RF IN (G)
1/2 REC VIDEO IN
SY-18, 21-3 | 3-3 | H: BP MONITOR DET IN
DTC144EK
DU, 85-1 | 8-3 | H: BP MONITOR DET OUT
NC | 7-2 | L: PAL SYSTEM IN
SY-18, 21-6 | 3-6 | H: CONFI EE IN
SV, 5-7 | 5-7 | H: REC FWD PAUSE IN
SV, 5-8 | 5-8 | GND
D37 1S2837
DRUM | 15-3 | REG +10.5V OUT
DRUM | 2-1 | CONFI VIDEO HEAD-A (X)
DRUM | 2-2 | CONFI VIDEO HEAD-A (G)
DRUM | 2-3 | CONFI VIDEO HEAD-B (X)
DRUM | 2-4 | CONFI VIDEO HEAD-B (G)
DRUM | 15-2 | GND
SY-22, 56-4 | 4-4 | CONFI Y OUT (X)
SY-22, 56-5 | 4-5 | CONFI Y OUT (G)
SY-22, 56-1 | 4-1 | CHARACTER GEN DATA IN
1/2 LINE VIDEO IN
DU, 84-1 | 13-1 | CAMERA VIDEO OUT (X)
DU, 84-2 | 13-2 | CAMERA VIDEO OUT (G)
SY-22, 56-2 | 4-2 | CHARACTER GEN BACK IN
SY-22, 56-3 | 4-3 | GND
Q81 2SC1623
IC21 CX22013
Q82 2SC4033SP PHASE EQ
Q83 2SC1623 C-BUFFER
IC23 CX20061 SYSTEM SW
Q84
TP29
TP30
VERTICAL CORRELATOR
HORIZONTAL CORRELATOR
DL11
RV16: Y/C SEP ADJ
H: SECAM
DUS-22
Q73, Q74 Q75
DTC144EKx2 DTA144EK
D71 1S1555
UNREG 12V
UNREG
IC21 CX22013
PRE AMP
GAIN CTL AMP
IC22 CX20061
IC25 HA12411
TP31
IF AMP
QUAD-RATURE DETECT
AFC AMP
AMP
OV SW
MUTE
LEVEL DET
MUTE DRIVE
TUNING METER DRIVER
SW'ING PULSE
REF 3.58MHz
REG 10.5V
REC 10.5V
Q88 2SC1009A
Q87 2SA812 CONFI VIDEO AMP
Q89 2SC1009A
IC24 TC4053BF CHARACTER DATA MIX
Q95 2SC1623
Q94 2SA812 CONFI VIDEO AMP
TP32
TP33
TP35
TP34
L: BACK
FIXED
RV17: CONFI VIDEO LEVEL
IC4 CX859
TP26
TP25
FREQ CONV
f/8
T1, LV2: 4.27MHz TUNING
-9V


Q82 2SC403SP PHASE EQ
Q83 2SC1623 C-BUFFER
IC23 CX20061 SYSTEM SW
Q84 2SC403SP Q85 2SC1623 REC CHROMA AMP
Q11 2SA1005 PB 10.5V SWITCHER
IC1 CX188 ACC AMP
IC1 CX188 FREQ CONVERTER
Q4 2SC403SP CHROMA DELAY (REC 3.58MHz)
Q2 2SC1623 Q58 2SC1623 3.58MHz CHROMA SELECTOR
Q1 2SC403SP 688KHz REC CHROMA AMP
TP30
TP14 TP15 TP16 TP17 TP18 TP19
RV11; CHROMA PB LEVEL
T10 ; REC CHROMA FREQ RESPONSE
RV10; CONVERTER BALANCE
REC; 688KHz CHROMA/PB; 358MHz CHROMA
H; SECAM
APC; 4.27MHz CARRIER
ACC ERROR
REC/PB 3.58MHz CHROMA
REC CHROMA RF OUT (X) 52-1 RP, 33-1
REC CHROMA RF OUT (G) 52-2 RP, 33-2
L; VIDEO CH-A REC IN 53-1 RP, 33-3
L; VIDEO CH-A REC OUT 6-3 SY-22, 56-8
L; VIDEO CH-B REC IN 53-2 RP, 33-4
L; VIDEO CH-B REC OUT 6-4 SY-22, 56-9
Q60 2SC1623 ACC LEVEL SW
IC1 CX188 ACC ERROR DETECTOR
ACC DET
BURST GATE
3.58MHz OSC
Q10 2SC403SP Q9 2SC1623 3.58MHz BURST TUNING AMP
IC1 CX188 COLOR KILLER DETECTOR
Q7 2SC945 Q6 2SC945 ACC TIME CONSTANT SW
KILLER DET
Q8 2SC1623 3.58MHz CHROMA OUTPUT AMP
TP21
3.58MHz CHROMA 1/2
RV12; ACC LEVEL
T2; BURST TUNING
RV13; CHROMA MIX LEVEL
FF /REW (L)
L; FF/REW IN 1/2
SW'ING PULSE
RF SW PULSE OUT (X) 43-1 YC, 23-7
RF SW PULSE OUT (G) 43-2 YC, 23-6
DELAYED SYNC
DELAYED SYNC OUT 1/2
TP22
BURST FLAG
Q15 2SC634 Q86 2SC403SP APC TIME CONSTANT SW (V-BLKG)
IC1 CX188 APC ERROR DETECTOR
APC DET
BURST GATE
Q12 2SC1623 REF 3.58MHz MUTING
Q62 2SC403SP Q13 2SC403SP REF 3.58MHz OSCILLATOR
Q14 2SC633 Q59 2SC633 BURST FLAG FORMER
TP24 TP36 TP20 TP39 TP23
CV2; REF OSC FREQ.
RV14; BURST FLAG LEVEL
SW'ING PULSE IN (X) 5-5 SV, 5-5
SW'ING PULSE IN (G) 5-6 SV, 5-6
SEPARATED SYNC OUT 1/2
SEPARATED SYNC OUT (X) 5-9 SV, 5-9
SEPARATED SYNC OUT (G) 5-10 SV, 5-10
V-BLK PULSE IN (X) 5-3 SV, 5-3
V-BLK PULSE IN (G) 5-4 SV, 5-4
V-BLK PULSE OUT 1/2
COLOR LOCK SW 7-1 NC
REF 3.58MHz
V-BLKG
SW'ING PULSE
IC4 CX859
IC3 TL082CP DROPOUT DETECTOR
TP26 TP25 TP27 TP28
FREQ CONV
f/8
VCO
ID
COMPARATOR
PRESET
COUNTER
f/8
SAMPLE HOLD
SLOPE
f/351
HALF H KILLER
SYNC SEP
REC/PB Y IN 1/2
T1, LV2; 4.27MHz TUNING
RV15; VCO FREQ
DO PULSE IN 1/2
DO DET OUT 1/2

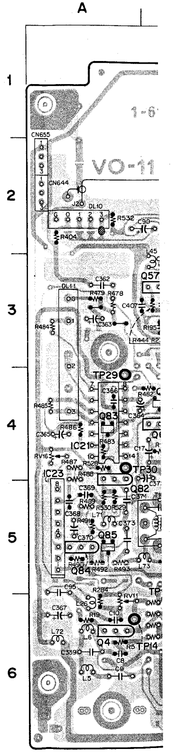
VO-11 (2/2)

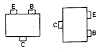
C MOD/DEMOD
1-611-951-11
VO-6800

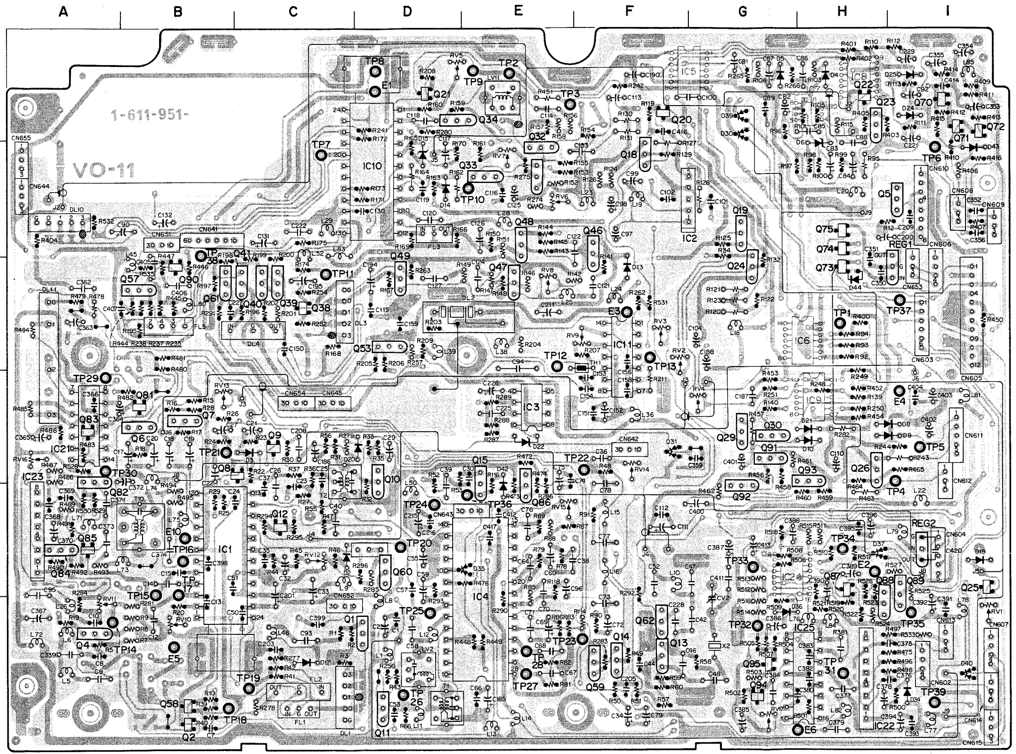
VO-11 (VIDEO REC/PB)

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)

CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN607	I - 6
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 2
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 2
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D31	F - 4
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 5
D39	G - 1
D40	I - 6
D42	E - 5
D43	I - 2
D44	H - 3
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	D - 1
E2	H - 5
E3	F - 3
E4	I - 4
E5	B - 6
E6	H - 6
E10	B - 5
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
LV11	E - 1
Q1	D - 6
Q2	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q11	D - 6
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q60	D - 5
Q61	B - 3
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q81	B - 4
Q82	A - 5
Q83	A - 4
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	H - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP6	I - 2
TP7	C - 2
TP8	D - 1
TP9	E - 1
TP10	E - 2
TP11	C - 3
TP12	E - 3
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP18	B - 6
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP32	G - 6
TP33	G - 5
TP34	H - 5
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6

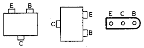

A
1
2
3
4
5
6
VO-11
CN655
CN644
J20
DL10
R532
C90
R404
L45
Q57
C362
DL11
R479
R478
C407
C363
R484
R195
R444
TP29
C366
R482
R485
Q83
C364
R486
C365
IC21
R483
C17
RV16
R487
R528
TP30
IC23
R488
Q82
C369
C371
R489
R530
R529
C368
L71
R491
C373
C370
Q85
R490
Q84
R492
R493
L73
C95
R284
RV11
L26
C367
R19
C10
L72
L6
Q4
R5
TP14
C339
C8
C9
L5




A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC21
IC22
IC23
IC24
IC25
REG1
REG2

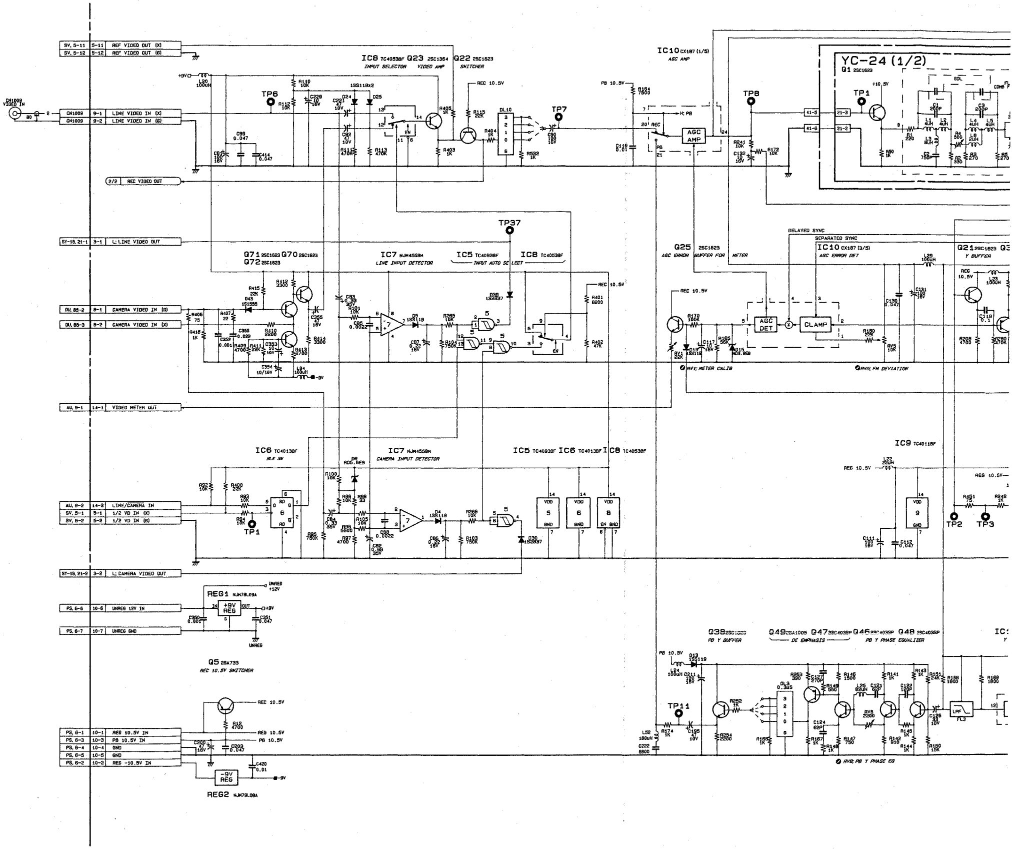
VO-11 -SOLDERING SIDE-

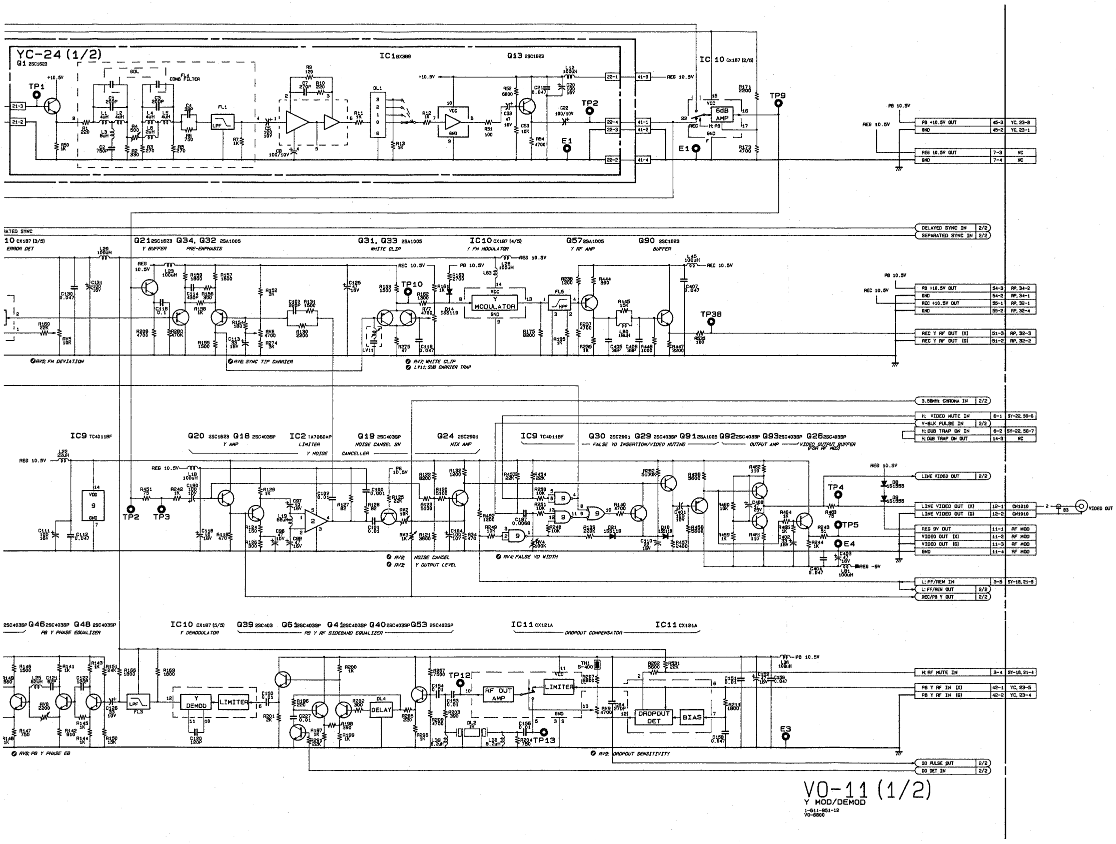
1-611-951-12
VO-6800



VO-11 (1/2) (Y MOD/DEMOD)
YC-24 (1/2)

S/N 10031 TO 10330 (UC)
S/N 10011 TO 10110 (J)


SV, 5-11 | 5-11 | REF VIDEO OUT (X)
SV, 5-12 | 5-12 | REF VIDEO OUT (G)
CN1009 VIDEO IN
CN1009 | 9-1 | LINE VIDEO IN (X)
CN1009 | 9-2 | LINE VIDEO IN (G)
2/2 | REC VIDEO OUT
SY-18, 21-1 | 3-1 | L; LINE VIDEO OUT
DU, 85-2 | 8-1 | CAMERA VIDEO IN (G)
DU, 85-3 | 8-2 | CAMERA VIDEO IN (X)
AU, 9-1 | 14-1 | VIDEO METER OUT
AU, 9-2 | 14-2 | LINE/CAMERA IN
SV, 5-1 | 5-1 | 1/2 VD IN (X)
SV, 5-2 | 5-2 | 1/2 VD IN (G)
SY-19, 21-2 | 3-2 | L; CAMERA VIDEO OUT
PS, 6-6 | 10-6 | UNREG 12V IN
PS, 6-7 | 10-7 | UNREG GND
PS, 6-1 | 10-1 | REG 10.5V IN
PS, 6-3 | 10-3 | PB 10.5V IN
PS, 6-4 | 10-4 | GND
PS, 6-5 | 10-5 | GND
PS, 6-2 | 10-2 | REG -10.5V IN
IC8 TC4053BF INPUT SELECTOR
Q23 2SC1364 VIDEO AMP
Q22 2SC1623 SWITCHER
IC10 CX187 (1/5) AGC AMP
AGC AMP
YC-24 (1/2)
Q1 2SC1623
TP6
TP7
TP8
TP1
TP37
DL10
Q71 2SC1623 Q70 2SC1623
Q72 2SC1623
IC7 NJM4558M LINE INPUT DETECTOR
IC5 TC4093BF INPUT AUTO SELECT
IC8 TC4053BF
Q25 2SC1623 AGC ERROR BUFFER FOR METER
IC10 CX187 (3/5) AGC ERROR DET
DELAYED SYNC
SEPARATED SYNC
AGC DET
CLAMP
Q21 2SC1623 Y BUFFER
RV1; METER CALIB
RV5; FM DEVIATION
IC6 TC4013BF BLK SW
IC7 NJM4558M CAMERA INPUT DETECTOR
IC5 TC4093BF IC6 TC4013BF IC8 TC4053BF
IC9 TC4011BF
TP2
TP3
REG1 NJM78L09A
+9V REG
UNREG +12V
Q5 2SA733 REC 10.5V SWITCHER
REC 10.5V
REG 10.5V
PB 10.5V
-9V REG
REG2 NJM79L09A
Q38 2SC1623 PB Y BUFFER
Q49 2SA1005 Q47 2SC4038P DE EMPHASIS
Q46 2SC4038P Q48 2SC4038P PB Y PHASE EQUALIZER
TP11
DL3 0.3uS
LPF FL3
RV8; PB Y PHASE EQ


YC-24 (1/2)
Q1 2SC1623
TP1
CDL
COMB FILTER
FL1
LPF
IC1 BX389
DL1
Q13 2SC1623
TP2
E1
IC 10 CX187 (2/5)
6dB AMP
REC
PB
TP9
REG 10.5V
PB 10.5V
PB +10.5V OUT
GND
REG 10.5V OUT
YC, 23-8
YC, 23-1
NC
DELAYED SYNC IN
SEPARATED SYNC IN
10 CX187 (3/5)
ERROR DET
Q21 2SC1623 Q34, Q32 2SA1005
Y BUFFER
PRE-EMPHASIS
Q31, Q33 2SA1005
WHITE CLIP
IC10 CX187 (4/5)
Y FM MODULATOR
Y MODULATOR
Q57 2SA1005
Y RF AMP
Q90 2SC1623
BUFFER
TP10
HPF
TP38
REC +10.5V OUT
REC Y RF OUT (X)
REC Y RF OUT (G)
RP, 34-2
RP, 34-1
RP, 32-1
RP, 32-4
RP, 32-3
RP, 32-2
RV5: FM DEVIATION
RV6: SYNC TIP CARRIER
RV7: WHITE CLIP
LV11: SUB CARRIER TRAP
3.58MHz CHROMA IN
H: VIDEO MUTE IN
V-BLK PULSE IN
H: DUB TRAP ON IN
H: DUB TRAP ON OUT
SY-22, 56-6
SY-22, 56-7
IC9 TC4011BF
Q20 2SC1623 Q18 2SC403SP
Y AMP
IC2 IA7060AP
LIMITER
Y NOISE
Q19 2SC403SP
NOISE CANSEL SW
CANCELLER
Q24 2SC2901
MIX AMP
IC9 TC4011BF
Q30 2SC2901 Q29 2SC403SP Q91 2SA1005 Q92 2SC403SP Q93 2SC403SP Q26 2SC403SP
FALSE VD INSERTION/VIDEO MUTING
OUTPUT AMP
VIDEO OUTPUT BUFFER (FOR RF MOD)
TP2
TP3
TP4
TP5
E4
LINE VIDEO OUT
LINE VIDEO OUT (X)
LINE VIDEO OUT (G)
CN1010
VIDEO OUT
REG 9V OUT
VIDEO OUT (X)
VIDEO OUT (G)
RF MOD
RV2: NOISE CANCEL
RV3: Y OUTPUT LEVEL
RV4: FALSE VD WIDTH
L: FF/REW IN
L: FF/REW OUT
REC/PB Y OUT
SY-18, 21-5
2SC403SP Q46 2SC403SP Q48 2SC403SP
PB Y PHASE EQUALIZER
IC10 CX187 (5/5)
Y DEMODULATOR
Y DEMOD
LIMITER
Q39 2SC403
Q61 2SC403SP Q41 2SC403SP Q40 2SC403SP Q53 2SC403SP
PB Y RF SIDEBAND EQUALIZER
DL4
DELAY
IC11 CX121A
DROPOUT COMPENSATOR
IC11 CX121A
TP12
RF OUT AMP
LIMITER
TP13
DROPOUT DET
BIAS
E3
H: RF MUTE IN
PB Y RF IN (X)
PB Y RF IN (G)
SY-18, 21-4
YC, 23-5
YC, 23-4
DO PULSE OUT
DO DET IN
RV8: PB Y PHASE EQ
RV9: DROPOUT SENSITIVITY

VO-11 (1/2)

Y MOD/DEMOD

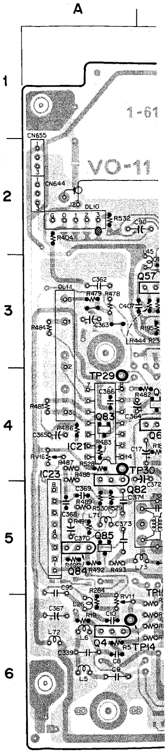
1-611-951-12

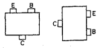
VO-8800

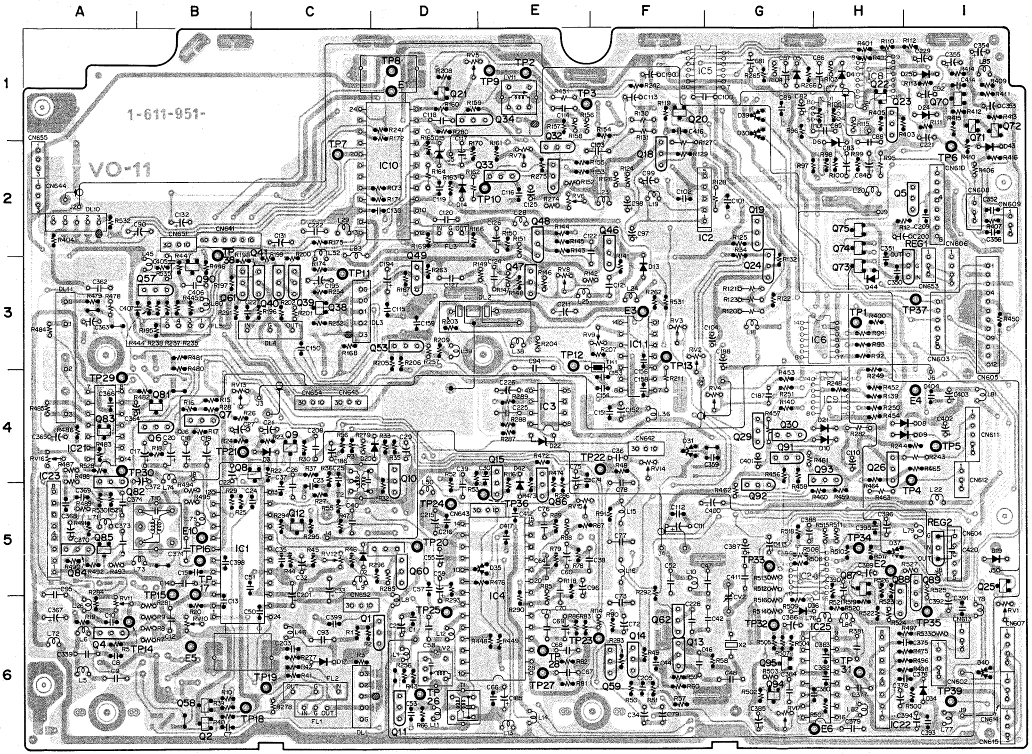
VO-11 (VIDEO REC/PB)

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)

CN602	I - 6	FL1	C - 6	Q72	I - 1	TP25	D - 6
CN603	I - 3	FL2	C - 6	Q73	H - 3	TP26	D - 6
CN604	I - 5	FL3	D - 2	Q74	H - 2	TP27	E - 6
CN605	I - 3	FL5	B - 3	Q75	H - 2	TP28	E - 6
CN606	I - 3			Q81	B - 4	TP29	A - 4
CN607	I - 6	IC1	B - 5	Q82	A - 5	TP30	A - 4
CN608	I - 2	IC2	G - 2	Q83	A - 4	TP31	H - 6
CN609	I - 2	IC3	E - 4	Q84	A - 5	TP32	G - 6
CN610	I - 2	IC4	E - 6	Q85	A - 5	TP33	G - 5
CN611	I - 4	IC5	G - 1	Q86	E - 5	TP34	H - 5
CN612	I - 4	IC6	H - 3	Q87	H - 5	TP35	I - 6
CN613	I - 6	IC7	H - 1	Q88	H - 6	TP36	E - 5
CN614	I - 6	IC8	H - 1	Q89	I - 5	TP37	I - 3
CN615	I - 6	IC9	H - 4	Q90	B - 3	TP38	B - 2
CN641	B - 2	IC10	D - 2	Q91	G - 4	TP39	I - 6
CN642	F - 4	IC11	F - 3	Q92	G - 5		
CN643	E - 5	IC21	A - 4	Q93	H - 4	X2	G - 6
CN644	A - 2	IC22	H - 6	Q94	G - 6		
CN645	C - 4	IC23	A - 5	Q95	G - 6		
CN651	B - 2	IC24	G - 5				
CN652	C - 6	IC25	H - 6	REG1	I - 3		
CN653	I - 3			REG2	I - 5		
CN654	C - 4	LV2	D - 6				
CN655	A - 2	LV11	E - 1	RV1	I - 6		
				RV2	F - 3		
CV2	G - 6	Q1	D - 6	RV3	F - 3		
		Q2	B - 6	RV4	G - 4		
D2	C - 5	Q4	A - 6	RV5	D - 1		
D3	C - 4	Q5	I - 2	RV6	E - 2		
D4	H - 1	Q6	B - 4	RV7	E - 2		
D5	G - 1	Q7	B - 4	RV8	E - 3		
D6	H - 2	Q8	C - 4	RV9	F - 3		
D8	I - 4	Q9	C - 4	RV10	B - 6		
D9	I - 4	Q10	D - 4	RV11	A - 6		
D10	H - 4	Q11	D - 6	RV12	C - 5		
D13	F - 3	Q12	C - 5	RV13	B - 4		
D14	D - 2	Q13	F - 6	RV14	F - 4		
D15	D - 2	Q14	F - 6	RV15	E - 5		
D17	C - 6	Q15	E - 5	RV16	A - 4		
D19	I - 5	Q18	F - 2	RV17	G - 6		
D20	D - 4	Q19	G - 2				
D21	H - 4	Q20	F - 1	T1	D - 6		
D22	E - 4	Q21	D - 1	T2	C - 5		
D24	I - 1	Q22	H - 1	T10	B - 5		
D25	I - 1	Q23	H - 1				
D30	G - 1	Q24	G - 3	TH1	F - 3		
D31	F - 4	Q25	I - 5				
D34	I - 6	Q26	H - 4	TP1	H - 3		
D35	E - 5	Q29	G - 4	TP2	E - 1		
D36	G - 6	Q30	G - 4	TP3	E - 1		
D37	H - 5	Q31	E - 2	TP4	I - 5		
D39	G - 1	Q32	E - 2	TP5	I - 4		
D40	I - 6	Q33	E - 2	TP6	I - 2		
D42	E - 5	Q34	D - 1	TP7	C - 2		
D43	I - 2	Q38	C - 3	TP8	D - 1		
D44	H - 3	Q39	C - 3	TP9	E - 1		
		Q40	C - 3	TP10	E - 2		
DL1	C - 6	Q41	C - 3	TP11	C - 3		
DL2	E - 3	Q46	F - 2	TP12	E - 3		
DL3	C - 3	Q47	E - 3	TP13	F - 3		
DL4	C - 3	Q48	E - 2	TP14	A - 6		
DL10	A - 2	Q49	D - 3	TP15	B - 5		
DL11	A - 3	Q53	D - 3	TP16	B - 5		
		Q57	B - 3	TP17	B - 5		
E1	D - 1	Q58	B - 6	TP18	B - 6		
E2	H - 5	Q59	F - 6	TP19	C - 6		
E3	F - 3	Q60	D - 5	TP20	D - 5		
E4	I - 4	Q61	B - 3	TP21	B - 4		
E5	B - 6	Q62	F - 6	TP22	F - 4		
E6	H - 6	Q70	I - 1	TP23	F - 6		
E10	B - 5	Q71	I - 1	TP24	D - 5		

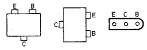

A
1
2
3
4
5
6
1-61
VO-11
CN655
CN644
DL10
R532
R404
DL11
C362
R479
R478
Q57
C363
R484
TP29
C366
R482
Q83
C364
R485
R486
C365
IC21
R483
RV16
R487
R488
TP30
IC23
C369
Q82
R489
C368
L71
C373
Q85
C370
Q84
R492
R493
C95
R284
RV11
C367
L6
L72
Q4
TP14
C339
L5




A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC21
IC22
IC23
IC24
IC25
REG1
REG2
CN603
CN605
CN641
CN642
CN654
CN655
DL2
DL4
FL1
FL2
FL3

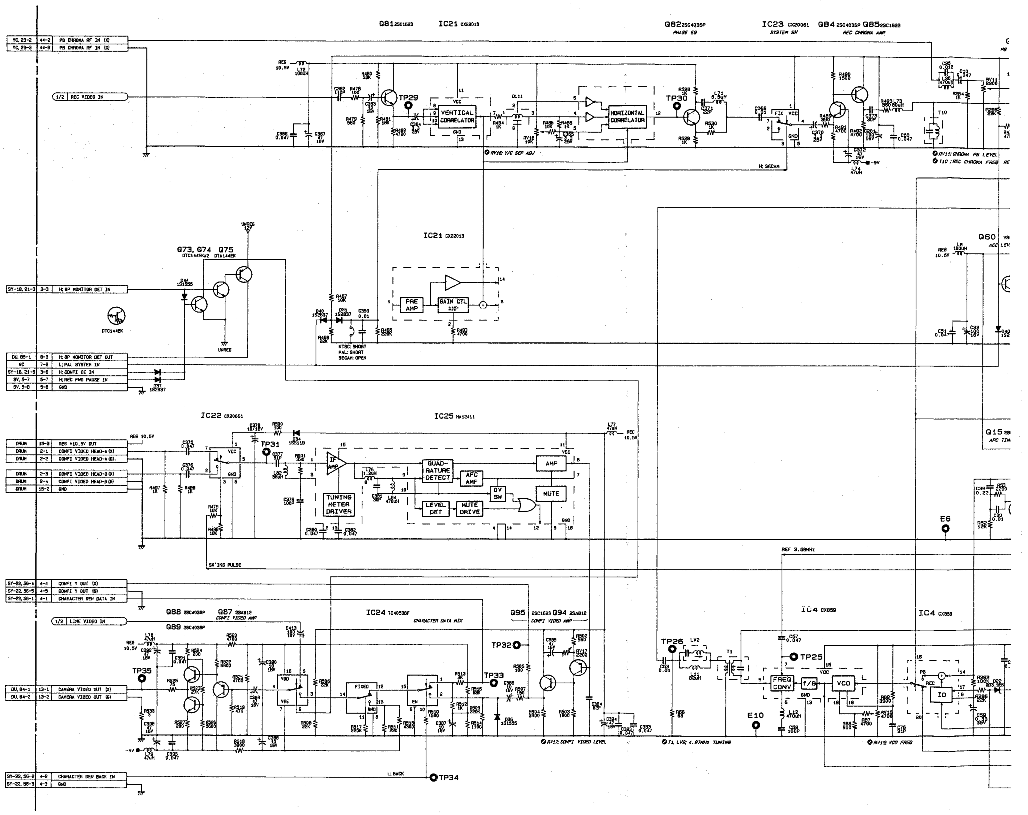
VO-11 -SOLDERING SIDE-

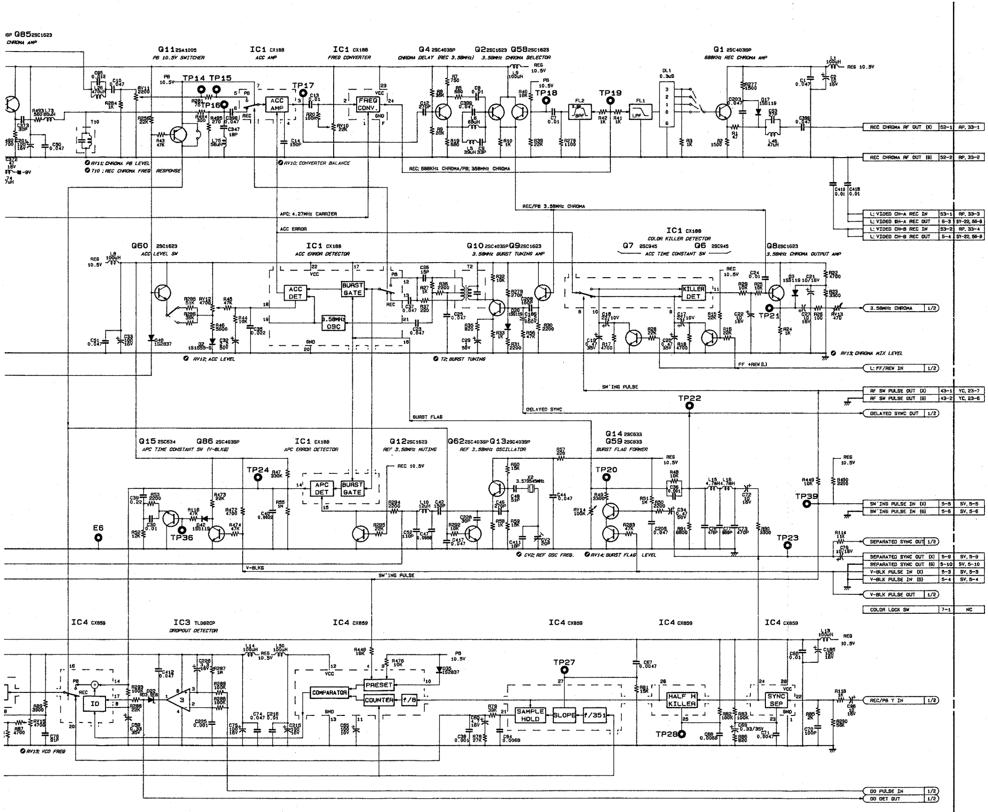
1-611-951-12
VO-6800



VO-11 (2/2) (CHROMA MOD/DEMOD)

S/N 10031 TO 10330 (UC)
S/N 10011 TO 10110 (J)


Q81 2SC1523
IC21 CX22013
Q82 2SC403SP
PHASE EQ
IC23 CX20061
SYSTEM SW
Q84 2SC403SP
Q85 2SC1523
REC CHROMA AMP
PB CHROMA RF IN (X)
PB CHROMA RF IN (S)
1/2 REC VIDEO IN
TP29
VERTICAL CORRELATOR
HORIZONTAL CORRELATOR
TP30
RV16: Y/C SEP ADJ
RV11: CHROMA PB LEVEL
T10: REC CHROMA FREQ
H: SECAM
IC21 CX22013
PRE AMP
GAIN CTL AMP
NTSC: SHORT
PAL: SHORT
SECAM: OPEN
Q73, Q74 Q75
DTC144EK
H: BP MONITOR DET IN
H: BP MONITOR DET OUT
L: PAL SYSTEM IN
H: CONFI EE IN
H: REC FWD PAUSE IN
GND
Q60
ACC LEVEL
IC22 CX20061
IC25 MA12411
TP31
REG +10.5V OUT
CONFI VIDEO HEAD-A (X)
CONFI VIDEO HEAD-A (S)
CONFI VIDEO HEAD-B (X)
CONFI VIDEO HEAD-B (S)
IF AMP
QUADRATURE DETECT
AFC AMP
AMP
MUTE
DV SW
TUNING METER DRIVER
LEVEL DET
MUTE DRIVE
SW'ING PULSE
Q15
APC TIM
E6
REF 3.58MHz
CONFI Y OUT (X)
CONFI Y OUT (S)
CHARACTER GEN DATA IN
1/2 LINE VIDEO IN
Q88 2SC403SP
Q87 2SA812
CONFI VIDEO AMP
Q89 2SC403SP
IC24 TC4053BF
CHARACTER DATA MIX
Q95 2SC1623
Q94 2SA812
CONFI VIDEO AMP
IC4 CX859
IC4 CX859
TP32
TP33
TP35
TP26
TP25
FREQ CONV
f/8
VCO
ID
E10
CAMERA VIDEO OUT (X)
CAMERA VIDEO OUT (S)
RV17: CONFI VIDEO LEVEL
T1, LV2: 4.27MHz TUNING
RV15: VCO FREQ
L: BACK
TP34
CHARACTER GEN BACK IN


Q85 2SC1623 CHROMA AMP
Q11 2SA1005 PB 10.5V SWITCHER
IC1 CX188 ACC AMP
IC1 CX188 FREQ CONVERTER
Q4 2SC403SP CHROMA DELAY (REC 3.58MHz)
Q2 2SC1623 Q58 2SC1623 3.58MHz CHROMA SELECTOR
Q1 2SC403SP 688KHz REC CHROMA AMP
TP14 TP15 TP16 TP17 TP18 TP19
ACC AMP
FREQ CONV.
BPF
LPF
DL1 0.3uS
FL1
FL2
RV11: CHROMA PB LEVEL
T10 : REC CHROMA FREQ RESPONSE
RV10: CONVERTER BALANCE
REC; 688KHz CHROMA/PB; 358MHz CHROMA
REC/PB 3.58MHz CHROMA
APC; 4.27MHz CARRIER
ACC ERROR
Q60 2SC1623 ACC LEVEL SW
IC1 CX188 ACC ERROR DETECTOR
ACC DET
BURST GATE
3.58MHz OSC
Q10 2SC403SP Q9 2SC1623 3.58MHz BURST TUNING AMP
IC1 CX188 COLOR KILLER DETECTOR
Q7 2SC945 Q6 2SC945 ACC TIME CONSTANT SW
KILLER DET
Q8 2SC1623 3.58MHz CHROMA OUTPUT AMP
TP21
RV12: ACC LEVEL
T2: BURST TUNING
RV13: CHROMA MIX LEVEL
FF +REW (L)
SW'ING PULSE
DELAYED SYNC
BURST FLAG
TP22
Q15 2SC634 APC TIME CONSTANT SW (V-BLKG)
Q86 2SC403SP
IC1 CX188 APC ERROR DETECTOR
APC DET
BURST GATE
Q12 2SC1623 REF 3.58MHz MUTING
Q62 2SC403SP Q13 2SC403SP REF 3.58MHz OSCILLATOR
Q14 2SC633 Q59 2SC633 BURST FLAG FORMER
TP24 TP36 TP20 TP39 TP23
E6
X2 3.579545MHz
CV2; REF OSC FREQ.
RV14; BURST FLAG LEVEL
V-BLKG
SW'ING PULSE
IC4 CX859
IC3 TL082CP DROPOUT DETECTOR
ID
COMPARATOR
PRESET
COUNTER
f/8
TP27
SAMPLE HOLD
SLOPE
f/351
HALF H KILLER
SYNC SEP
TP28
RV15; VCO FREQ
REG 10.5V
PB 10.5V
REC 10.5V
REC CHROMA RF OUT (X) | 52-1 | RP, 33-1
REC CHROMA RF OUT (G) | 52-2 | RP, 33-2
L; VIDEO CH-A REC IN | 53-1 | RP, 33-3
L; VIDEO CH-A REC OUT | 6-3 | SY-22, 56-8
L; VIDEO CH-B REC IN | 53-2 | RP, 33-4
L; VIDEO CH-B REC OUT | 6-4 | SY-22, 56-9
3.58MHz CHROMA | 1/2
L; FF/REW IN | 1/2
RF SW PULSE OUT (X) | 43-1 | YC, 23-7
RF SW PULSE OUT (G) | 43-2 | YC, 23-6
DELAYED SYNC OUT | 1/2
SW'ING PULSE IN (X) | 5-5 | SV, 5-5
SW'ING PULSE IN (G) | 5-6 | SV, 5-6
SEPARATED SYNC OUT | 1/2
SEPARATED SYNC OUT (X) | 5-9 | SV, 5-9
SEPARATED SYNC OUT (G) | 5-10 | SV, 5-10
V-BLK PULSE IN (X) | 5-3 | SV, 5-3
V-BLK PULSE IN (G) | 5-4 | SV, 5-4
V-BLK PULSE OUT | 1/2
COLOR LOCK SW | 7-1 | NC
REC/PB Y IN | 1/2
DO PULSE IN | 1/2
DO DET OUT | 1/2

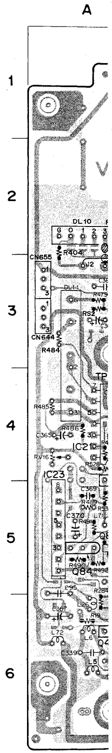
VO-11 (2/2)

C MOD/DEMOD
1-611-951-12
VO-6800

VO-11 (VIDEO REC/PB)

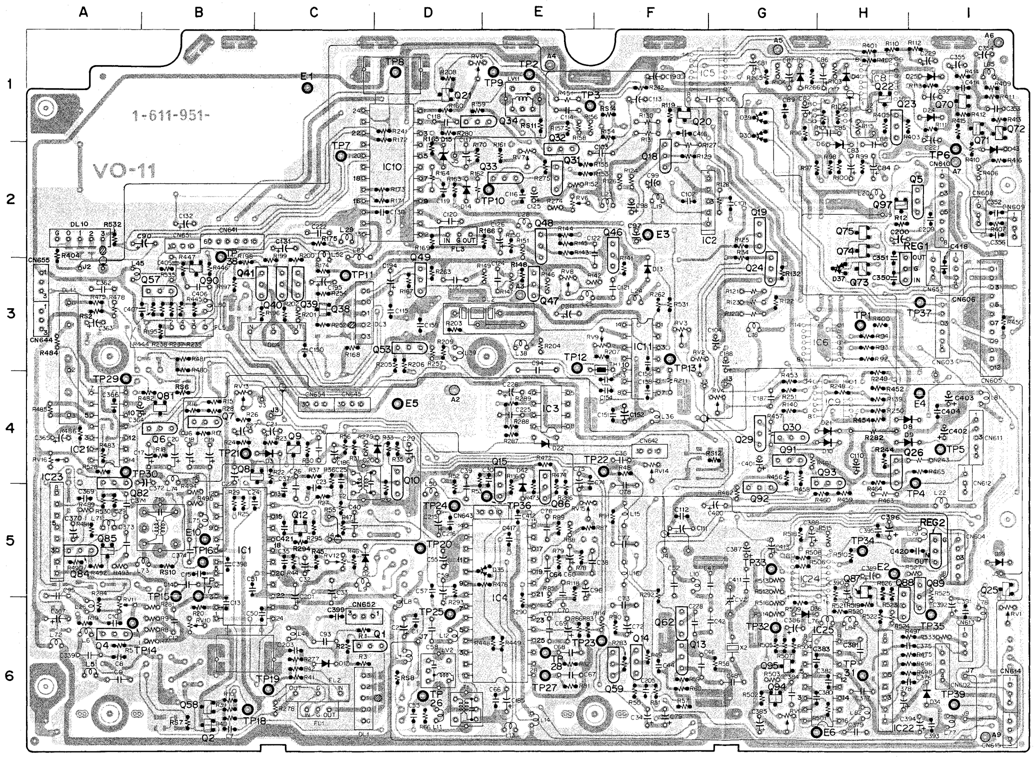
S/N 12781 TO 17730 (UC)
S/N 10561 TO 11560 (J)

CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 3
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 3
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 3
D39	G - 1
D42	E - 5
D43	I - 2
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	C - 1
E2	H - 5
E3	F - 2
E4	I - 4
E5	D - 4
E6	H - 6
E10	B - 5
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
LV11	E - 1
Q1	D - 6
Q2	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q81	B - 4
Q82	A - 5
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	I - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
Q97	H - 2
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP6	I - 2
TP7	C - 2
TP8	D - 1
TP9	E - 1
TP10	E - 2
TP11	C - 3
TP12	E - 3
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP18	B - 6
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP32	G - 6
TP33	G - 5
TP34	H - 5
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6

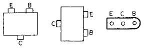


H - 6
G - 6
G - 5
H - 5
I - 6
E - 5
I - 3
B - 2
I - 6

G - 6


A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC6
IC9
IC10
IC11
IC21
IC22
IC23
IC24
IC25
REG1
REG2
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP26
TP27
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP35
TP36
TP37
TP38
TP39
E1
E2
E3
E4
E5
E6
E10
A2
A4
A5
A6
A7
A9
CN603
CN604
CN605
CN606
CN608
CN609
CN611
CN612
CN613
CN614
CN615
CN641
CN642
CN643
CN644
CN651
CN652
CN653
CN654
CN655
DL1
DL2
DL3
DL10
FL1
FL2
FL3
IN
G
OUT

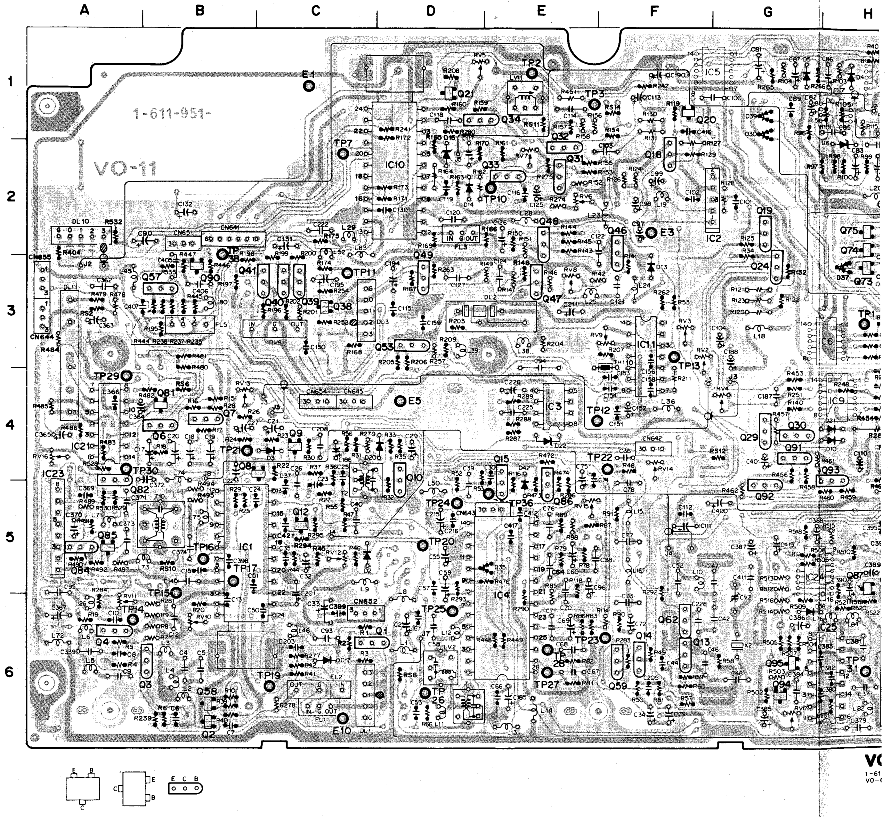
VO-11 -SOLDERING SIDE-
1-611-951-14
VO-6800

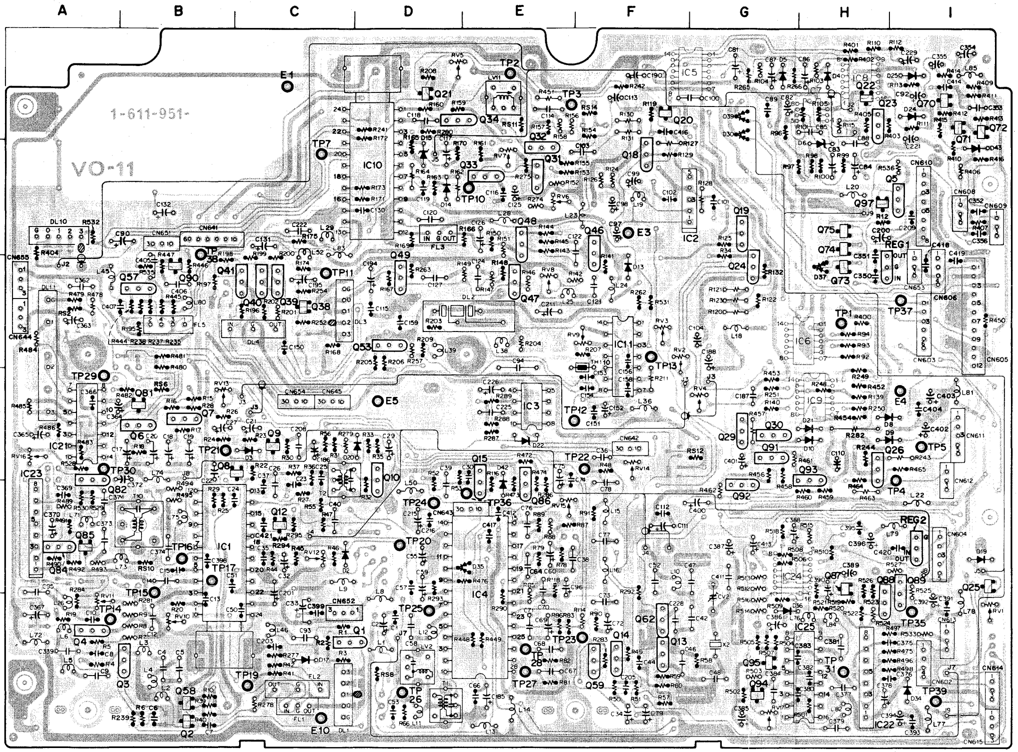


VO-11 (VIDEO REC/PB)

S/N 17731 AND LATER (UC)
S/N 11561 AND LATER (J)

CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 3
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 3
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 3
D39	G - 1
D42	E - 5
D43	I - 2
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	C - 1
E3	F - 2
E4	I - 4
E5	D - 4
E10	C - 6
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
LV11	E - 1
Q1	D - 6
Q2	B - 6
Q3	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q81	B - 4
Q82	A - 5
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	I - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
Q97	H - 2
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP7	C - 2
TP10	E - 2
TP11	C - 3
TP12	F - 4
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6




A
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6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC21
IC22
IC23
IC24
IC25
REG1
REG2
E1
E3
E4
E5
E10
TP1
TP2
TP3
TP4
TP5
TP7
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP19
TP20
TP21
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TP23
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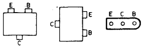
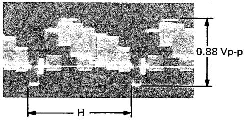
TP25
TP26
TP27
TP28
TP29
TP30
TP31
TP35
TP36
TP37
TP38
TP39

VO-11 -SOLDERING SIDE-

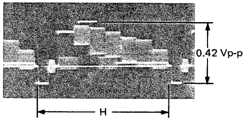
1-611-951-15,16
VO-6800



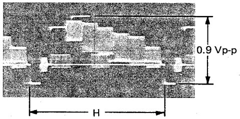
① TP6



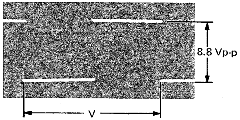
② TP7



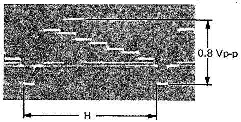
③ TP8



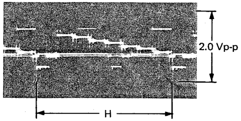
④ TP1



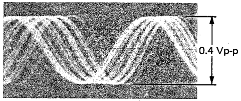
⑤ TP9



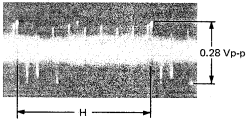
⑥ TP10



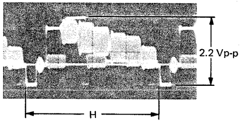
⑦ TP38



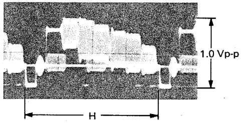
⑧ IC2-4



⑨ Q24-C



⑩ TP4



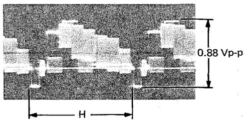
⑪ TP5

⑫ TP11

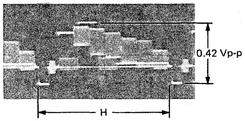
⑬ IC10-1

⑭ TP12

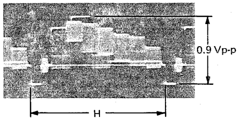
① TP6



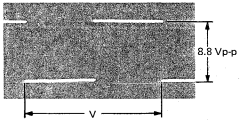
② TP7



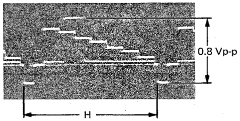
③ TP8



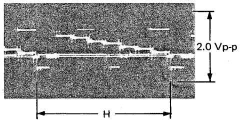
④ TP1



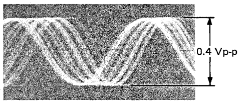
⑤ TP9



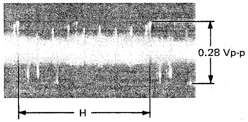
⑥ TP10



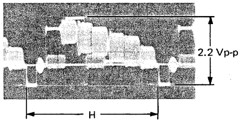
⑦ TP38



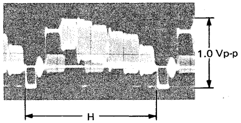
⑧ IC2-4



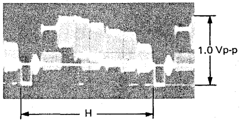
⑨ Q24-C



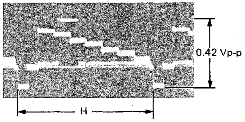
⑩ TP4



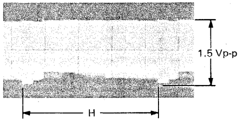
⑪ TP5



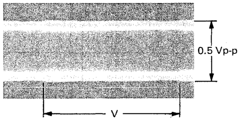
⑫ TP11



⑬ IC10-12

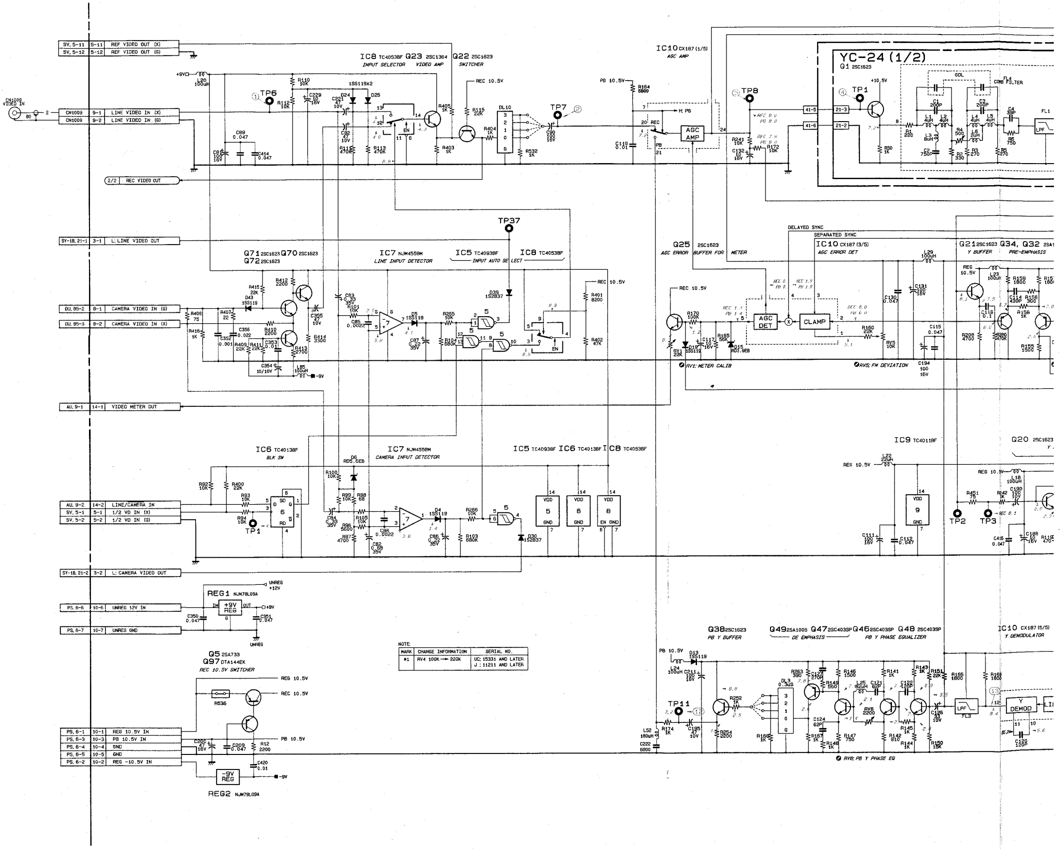


⑭ TP12



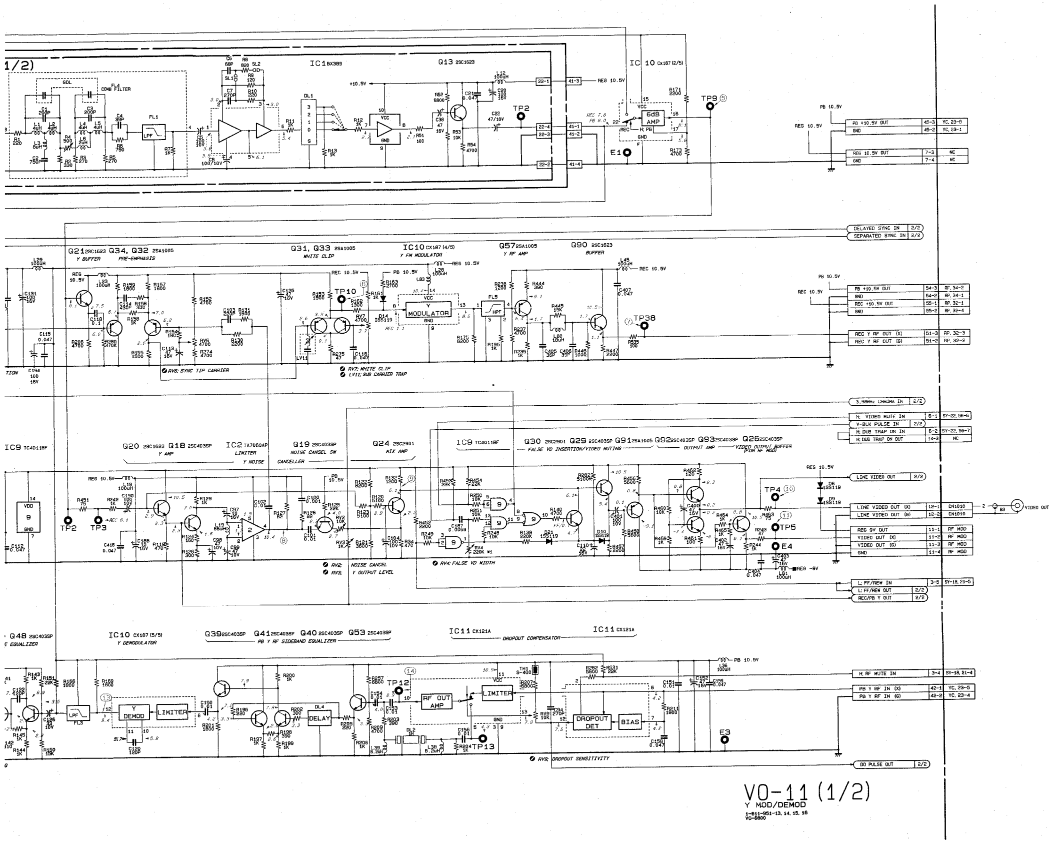
VO-11 (1/2) (Y MOD/DEMOD)
YC-24 (1/2)

S/N 10331 AND LATER (UC)
S/N 10111 AND LATER (J)


REF VIDEO OUT (X)
REF VIDEO OUT (G)
CN1009 VIDEO IN
LINE VIDEO IN (X)
LINE VIDEO IN (G)
REC VIDEO OUT
L: LINE VIDEO OUT
CAMERA VIDEO IN (G)
CAMERA VIDEO IN (X)
VIDEO METER OUT
LINE/CAMERA IN
1/2 VD IN (X)
1/2 VD IN (G)
L: CAMERA VIDEO OUT
UNREG 12V IN
UNREG GND
REG 10.5V IN
PB 10.5V IN
GND
REG -10.5V IN
IC8 TC4053BF INPUT SELECTOR
Q23 2SC1364 VIDEO AMP
Q22 2SC1623 SWITCHER
IC10 CX187 (1/5) AGC AMP
YC-24 (1/2)
Q1 2SC1623
COMB FILTER
GDL
LPF
TP1
TP6
TP7
TP8
TP37
Q71 2SC1623 Q70 2SC1623
Q72 2SC1623
IC7 NJM4558M LINE INPUT DETECTOR
IC5 TC4093BF INPUT AUTO SELECT
Q25 2SC1623 AGC ERROR BUFFER FOR METER
DELAYED SYNC
SEPARATED SYNC
IC10 CX187 (3/5) AGC ERROR DET
AGC DET
CLAMP
Q21 2SC1623 Y BUFFER
Q34, Q32 PRE-EMPHASIS
RV1: METER CALIB
RV5: FM DEVIATION
IC6 TC4013BF BLK SW
IC7 NJM4558M CAMERA INPUT DETECTOR
IC5 TC4093BF IC6 TC4013BF IC8 TC4053BF
IC9 TC4011BF
Q20 2SC1623
TP2
TP3
REG1 NJM78L09A
+9V REG
Q5 2SA733
Q97 DTA144EK
REC 10.5V SWITCHER
-9V REG
REG2 NJM79L09A
Q38 2SC1623 PB Y BUFFER
Q49 2SA1005 Q47 2SC403SP DE EMPHASIS
Q46 2SC403SP Q48 2SC403SP PB Y PHASE EQUALIZER
IC10 CX187 (5/5) Y DEMODULATOR
Y DEMOD
TP11
RV8: PB Y PHASE EQ

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
∗1	RV4 100K → 220K	UC; 15331 AND LATER J : 11211 AND LATER



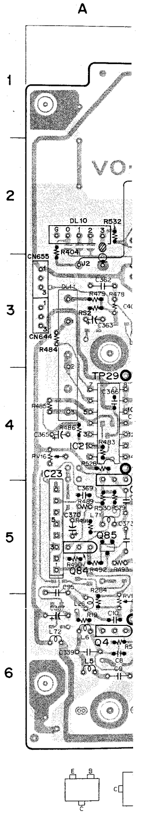
COMB FILTER
GDL
FL1
LPF
IC1 BX389
DL1
Q13 2SC1623
TP2
IC10 CX187 (2/5)
6dB AMP
VCC
GND
REC
PB
TP9
E1
REG 10.5V
PB 10.5V
PB +10.5V OUT
GND
REG 10.5V OUT
YC, 23-8
YC, 23-1
NC
DELAYED SYNC IN
SEPARATED SYNC IN
Q21 2SC1623 Y BUFFER
Q34, Q32 2SA1005 PRE-EMPHASIS
Q31, Q33 2SA1005 WHITE CLIP
IC10 CX187 (4/5) Y FM MODULATOR
Y MODULATOR
Q57 2SA1005 Y RF AMP
Q90 2SC1623 BUFFER
FL5
HPF
TP10
TP38
REC +10.5V OUT
RP, 34-2
RP, 34-1
RP, 32-1
RP, 32-4
REC Y RF OUT (X)
REC Y RF OUT (G)
RP, 32-3
RP, 32-2
RV6: SYNC TIP CARRIER
RV7: WHITE CLIP
LV11: SUB CARRIER TRAP
3.58MHz CHROMA IN
H: VIDEO MUTE IN
V-BLK PULSE IN
H: DUB TRAP ON IN
H: DUB TRAP ON OUT
SY-22, 56-6
SY-22, 56-7
IC9 TC4011BF
Q20 2SC1623 Q18 2SC403SP Y AMP
IC2 TA7060AP LIMITER
Y NOISE
Q19 2SC403SP NOISE CANSEL SW
CANCELLER
Q24 2SC2901 MIX AMP
IC9 TC4011BF
Q30 2SC2901 Q29 2SC403SP Q91 2SA1005 FALSE VD INSERTION/VIDEO MUTING
Q92 2SC403SP Q93 2SC403SP OUTPUT AMP
Q26 2SC403SP VIDEO OUTPUT BUFFER (FOR RF MOD)
TP2
TP3
TP4
TP5
E4
LINE VIDEO OUT
LINE VIDEO OUT (X)
LINE VIDEO OUT (G)
CN1010
VIDEO OUT
REG 9V OUT
VIDEO OUT (X)
VIDEO OUT (G)
RF MOD
RV2: NOISE CANCEL
RV3: Y OUTPUT LEVEL
RV4: FALSE VD WIDTH
REG -9V
L: FF/REW IN
L: FF/REW OUT
REC/PB Y OUT
SY-18, 21-5
Q48 2SC403SP EQUALIZER
IC10 CX187 (5/5) Y DEMODULATOR
Y DEMOD
LIMITER
LPF
FL3
Q39 2SC403SP Q41 2SC403SP Q40 2SC403SP Q53 2SC403SP PB Y RF SIDEBAND EQUALIZER
DL4
DELAY
IC11 CX121A DROPOUT COMPENSATOR
IC11 CX121A
RF OUT AMP
LIMITER
DROPOUT DET
BIAS
TP12
TP13
E3
H: RF MUTE IN
SY-18, 21-4
PB Y RF IN (X)
PB Y RF IN (G)
YC, 23-5
YC, 23-4
RV9: DROPOUT SENSITIVITY
DO PULSE OUT

VO-11 (1/2)
Y MOD/DEMOD
1-611-951-13, 14, 15, 16
VO-6800

VO-11 (VIDEO REC/PB)

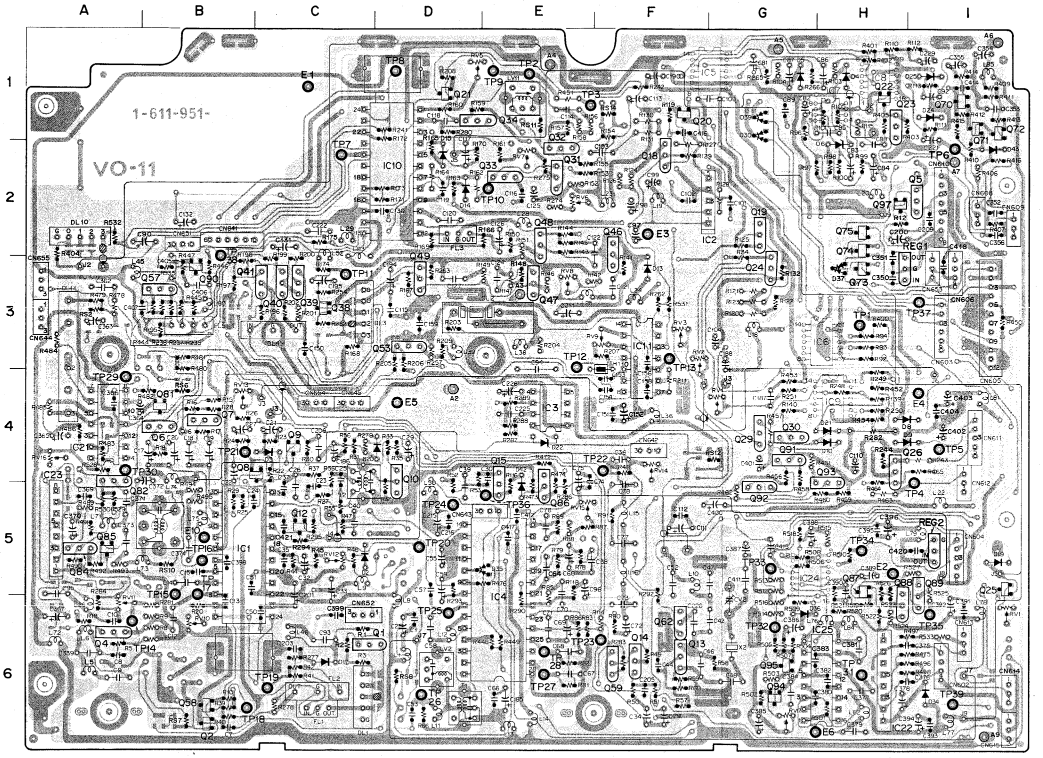
S/N 12781 TO 17730 (UC)
S/N 10561 TO 11560 (J)

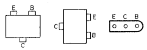
CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 3
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 3
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 3
D39	G - 1
D42	E - 5
D43	I - 2
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	C - 1
E2	H - 5
E3	F - 2
E4	I - 4
E5	D - 4
E6	H - 6
E10	B - 5
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
LV11	E - 1
Q1	D - 6
Q2	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q81	B - 4
Q82	A - 5
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	I - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
Q97	H - 2
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP6	I - 2
TP7	C - 2
TP8	D - 1
TP9	E - 1
TP10	E - 2
TP11	C - 3
TP12	E - 3
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP18	B - 6
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP32	G - 6
TP33	G - 5
TP34	H - 5
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6


A
1
2
3
4
5
6
VO-
DL10
R532
R404
CN655
DV2
C362
R479
R478
R52
C363
CN644
R484
TP29
C366
R485
R486
C365
IC21
R483
RV16
R526
IC23
C369
R489
C370
R530
L71
R491
Q85
R492
Q84
R493
R284
C95
R19
C10
L72
L6
Q4
C339
L5
C8
E
B
C

H-6
G-6
G-5
H-5
I-6
E-5
I-3
B-2
I-6

G-6


A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC6
IC10
IC11
IC21
IC22
IC23
IC24
IC25
REG1
REG2
DL1
DL3
DL10
FL1
FL2
FL3
CN602
CN603
CN604
CN605
CN606
CN608
CN609
CN610
CN611
CN612
CN613
CN614
CN615
CN641
CN642
CN643
CN644
CN645
CN651
CN652
CN653
CN654
CN655
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP27
TP29
TP30
TP32
TP33
TP34
TP35
TP36
TP37
TP39
E1
E2
E3
E4
E5
E6
A2
A4
A5
A6
A7
A9

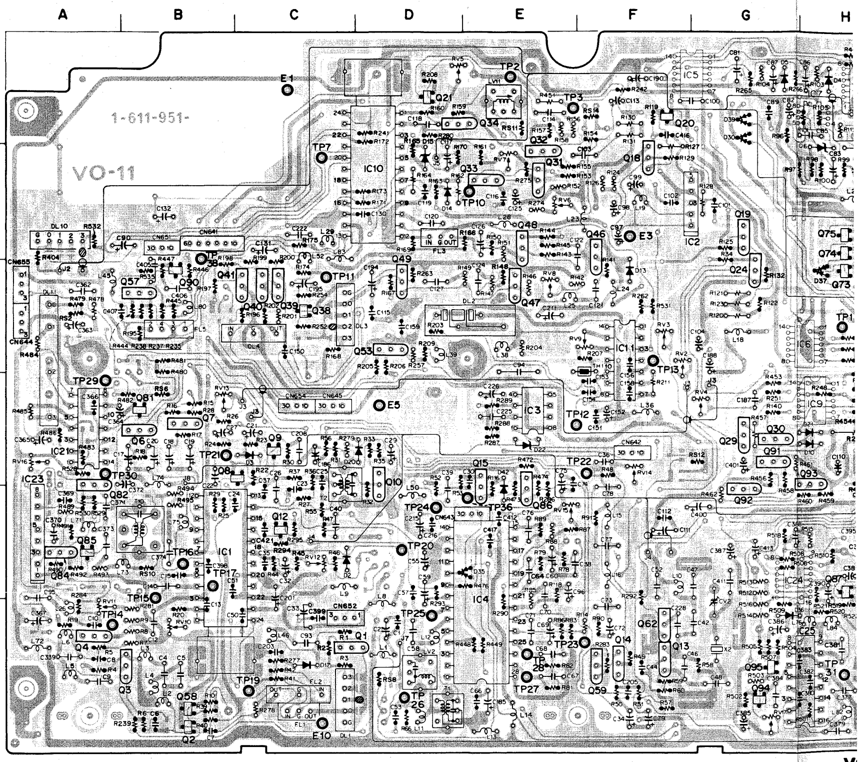


VO-11 -SOLDERING SIDE-
1-611-951-14
VO-6800

VO-11 (VIDEO REC/PB)

S/N 17731 AND LATER (UC)
S/N 11561 AND LATER (J)

CN602	I - 6
CN603	I - 3
CN604	I - 5
CN605	I - 3
CN606	I - 3
CN608	I - 2
CN609	I - 2
CN610	I - 2
CN611	I - 4
CN612	I - 4
CN613	I - 6
CN614	I - 6
CN615	I - 6
CN641	B - 2
CN642	F - 4
CN643	E - 5
CN644	A - 3
CN645	C - 4
CN651	B - 2
CN652	C - 6
CN653	I - 3
CN654	C - 4
CN655	A - 3
CV2	G - 6
D2	C - 5
D3	C - 4
D4	H - 1
D5	G - 1
D6	H - 2
D8	I - 4
D9	I - 4
D10	H - 4
D13	F - 3
D14	D - 2
D15	D - 2
D17	C - 6
D19	I - 5
D20	D - 4
D21	H - 4
D22	E - 4
D24	I - 1
D25	I - 1
D30	G - 1
D34	I - 6
D35	E - 5
D36	G - 6
D37	H - 3
D39	G - 1
D42	E - 5
D43	I - 2
DL1	C - 6
DL2	E - 3
DL3	C - 3
DL4	C - 3
DL10	A - 2
DL11	A - 3
E1	C - 1
E3	F - 2
E4	I - 4
E5	D - 4
E10	C - 6
FL1	C - 6
FL2	C - 6
FL3	D - 2
FL5	B - 3
IC1	B - 5
IC2	G - 2
IC3	E - 4
IC4	E - 6
IC5	G - 1
IC6	H - 3
IC7	H - 1
IC8	H - 1
IC9	H - 4
IC10	D - 2
IC11	F - 3
IC21	A - 4
IC22	H - 6
IC23	A - 5
IC24	G - 5
IC25	H - 6
LV2	D - 6
LV11	E - 1
Q1	D - 6
Q2	B - 6
Q3	B - 6
Q4	A - 6
Q5	I - 2
Q6	B - 4
Q7	B - 4
Q8	C - 4
Q9	C - 4
Q10	D - 4
Q12	C - 5
Q13	F - 6
Q14	F - 6
Q15	E - 5
Q18	F - 2
Q19	G - 2
Q20	F - 1
Q21	D - 1
Q22	H - 1
Q23	H - 1
Q24	G - 3
Q25	I - 5
Q26	H - 4
Q29	G - 4
Q30	G - 4
Q31	E - 2
Q32	E - 2
Q33	E - 2
Q34	D - 1
Q38	C - 3
Q39	C - 3
Q40	C - 3
Q41	C - 3
Q46	F - 2
Q47	E - 3
Q48	E - 2
Q49	D - 3
Q53	D - 3
Q57	B - 3
Q58	B - 6
Q59	F - 6
Q62	F - 6
Q70	I - 1
Q71	I - 1
Q72	I - 1
Q73	H - 3
Q74	H - 2
Q75	H - 2
Q81	B - 4
Q82	A - 5
Q84	A - 5
Q85	A - 5
Q86	E - 5
Q87	H - 5
Q88	I - 6
Q89	I - 5
Q90	B - 3
Q91	G - 4
Q92	G - 5
Q93	H - 4
Q94	G - 6
Q95	G - 6
Q97	H - 2
REG1	I - 3
REG2	I - 5
RV1	I - 6
RV2	F - 3
RV3	F - 3
RV4	G - 4
RV5	D - 1
RV6	E - 2
RV7	E - 2
RV8	E - 3
RV9	F - 3
RV10	B - 6
RV11	A - 6
RV12	C - 5
RV13	B - 4
RV14	F - 4
RV15	E - 5
RV16	A - 4
RV17	G - 6
T1	D - 6
T2	C - 5
T10	B - 5
TH1	F - 3
TP1	H - 3
TP2	E - 1
TP3	E - 1
TP4	I - 5
TP5	I - 4
TP7	C - 2
TP10	E - 2
TP11	C - 3
TP12	F - 4
TP13	F - 3
TP14	A - 6
TP15	B - 5
TP16	B - 5
TP17	B - 5
TP19	C - 6
TP20	D - 5
TP21	B - 4
TP22	F - 4
TP23	F - 6
TP24	D - 5
TP25	D - 6
TP26	D - 6
TP27	E - 6
TP28	E - 6
TP29	A - 4
TP30	A - 4
TP31	H - 6
TP35	I - 6
TP36	E - 5
TP37	I - 3
TP38	B - 2
TP39	I - 6
X2	G - 6


A
B
C
D
E
F
G
H
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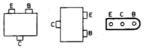
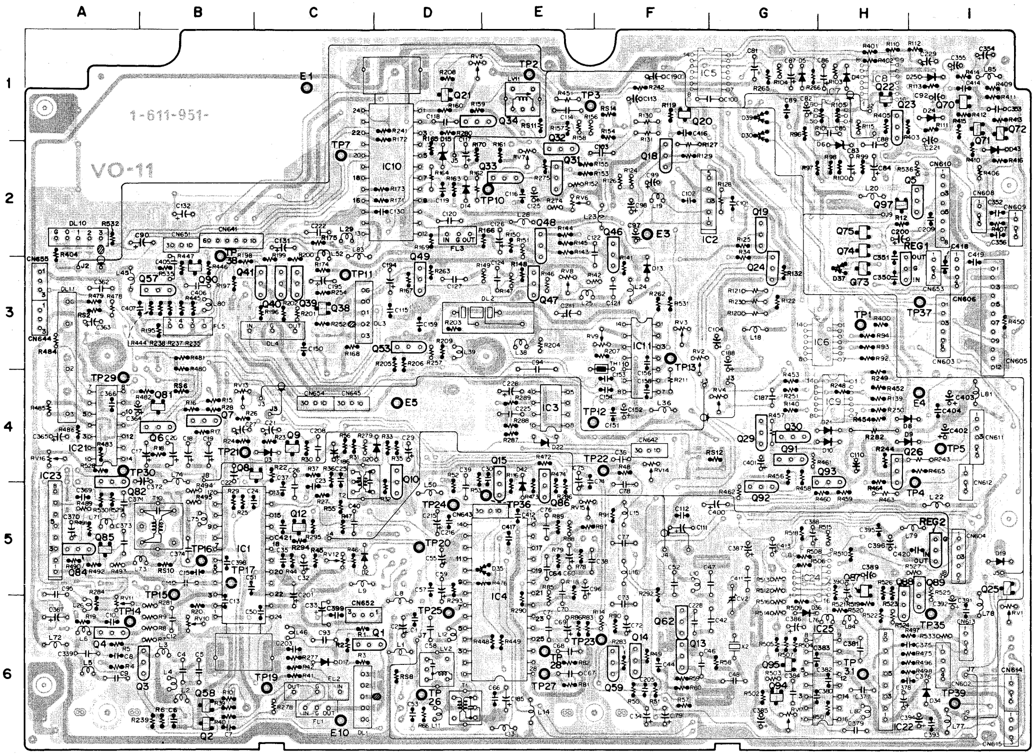
3
4
5
6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC10
IC11
IC21
IC23
IC24
IC25
CN641
CN651
CN652
CN654
CN645
CN642
CN643
CN655
CN644
DL1
DL2
DL3
DL4
DL10
FL1
FL2
FL3
FL5
E1
E3
E5
E10




A
B
C
D
E
F
G
H
I
1
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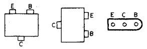
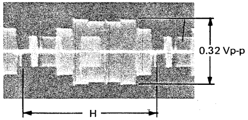
3
4
5
6
1-611-951-
VO-11
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC21
IC22
IC23
IC24
IC25
REG1
REG2
TP1
TP2
TP3
TP4
TP5
TP7
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP26
TP27
TP28
TP29
TP30
TP31
TP35
TP36
TP37
TP38
TP39
E1
E3
E4
E5
E10
CN603
CN604
CN605
CN606
CN608
CN609
CN610
CN611
CN612
CN613
CN614
CN615
CN641
CN642
CN643
CN644
CN645
CN651
CN652
CN653
CN654
CN655
DL1
DL2
DL3
DL4
DL10
DL11
FL1
FL2
FL3
FL5



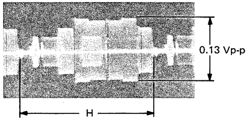
VO-11 -SOLDERING SIDE-

1-611-951-15,16
VO-6800

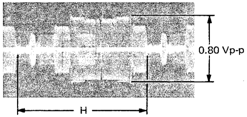
⑮ TP29



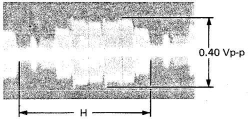
⑯ TP30



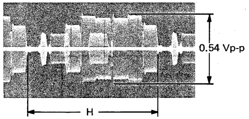
⑰ TP16



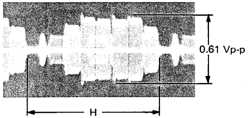
⑱ TP15



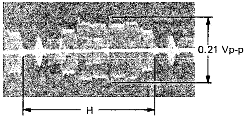
⑲ TP17
(REC mode)



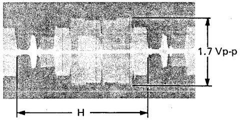
(PB mode)



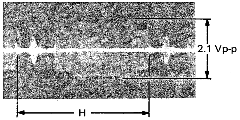
⑳ TP18



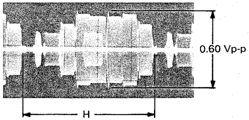
㉑ TP19
(REC mode)



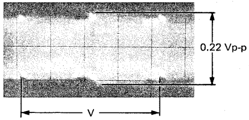
(PB mode)



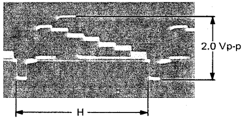
㉒ CN52-1



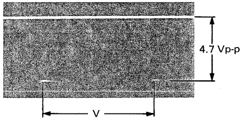
㉓ TP31



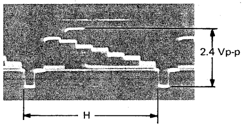
㉔ TP32



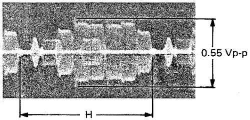
㉕ TP33



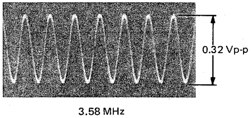
㉖ TP35



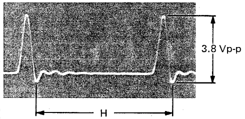
㉗ TP21



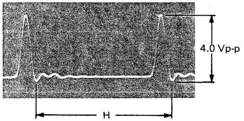
㉘ IC1-5



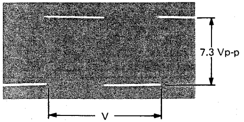
㉙ TP20



㉚ TP22



㉛ TP39

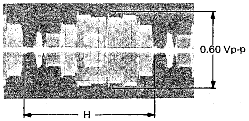


㉜ TP26

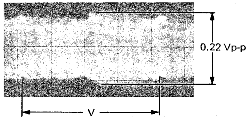
㉝ TP25

㉞ TP27

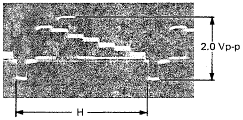
㉒ CN52-1



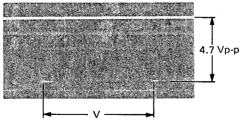
㉓ TP31



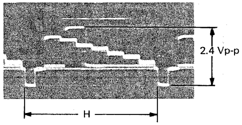
㉔ TP32



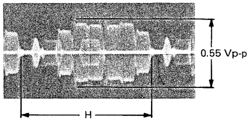
㉕ TP33



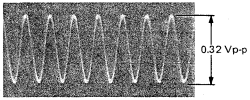
㉖ TP35



㉗ TP21

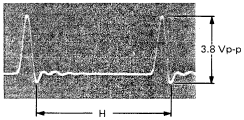


㉘ IC1-5

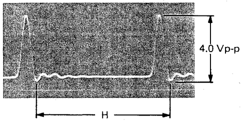


3.58 MHz

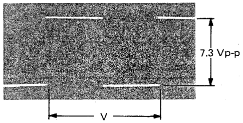
㉙ TP20



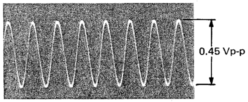
㉚ TP22



㉛ TP39

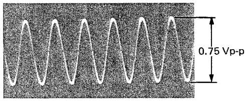


㉜ TP26



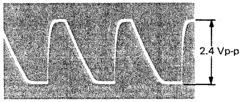
4.27 MHz

㉝ TP25



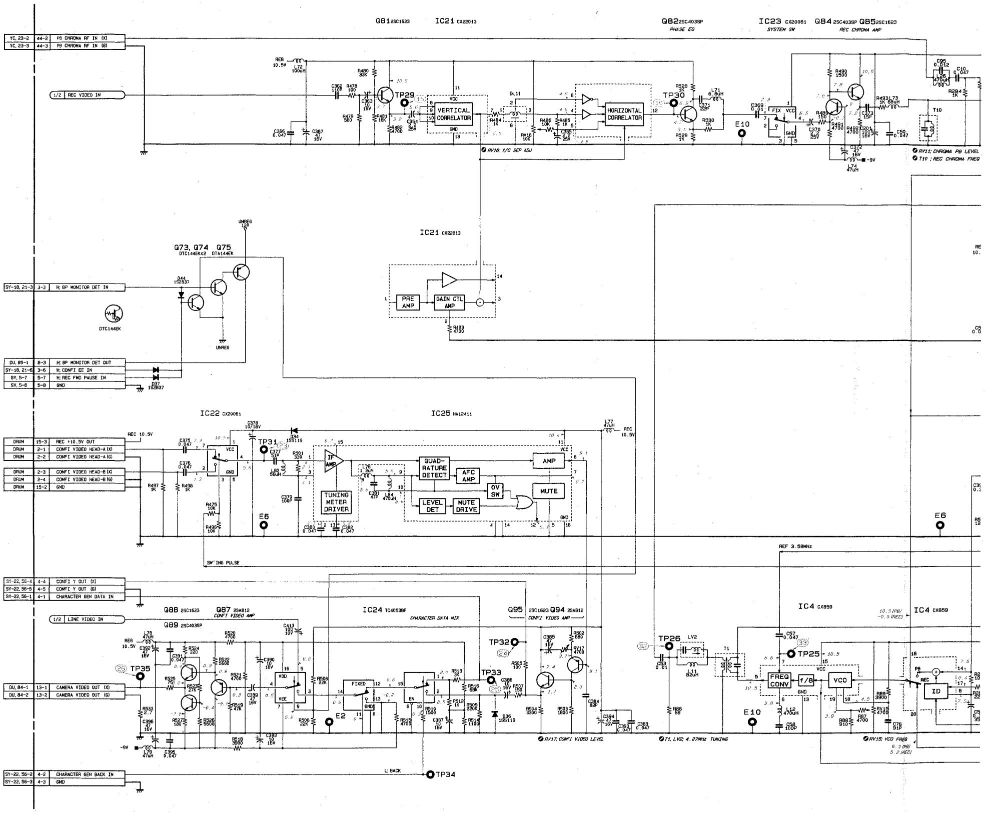
3.58MHz

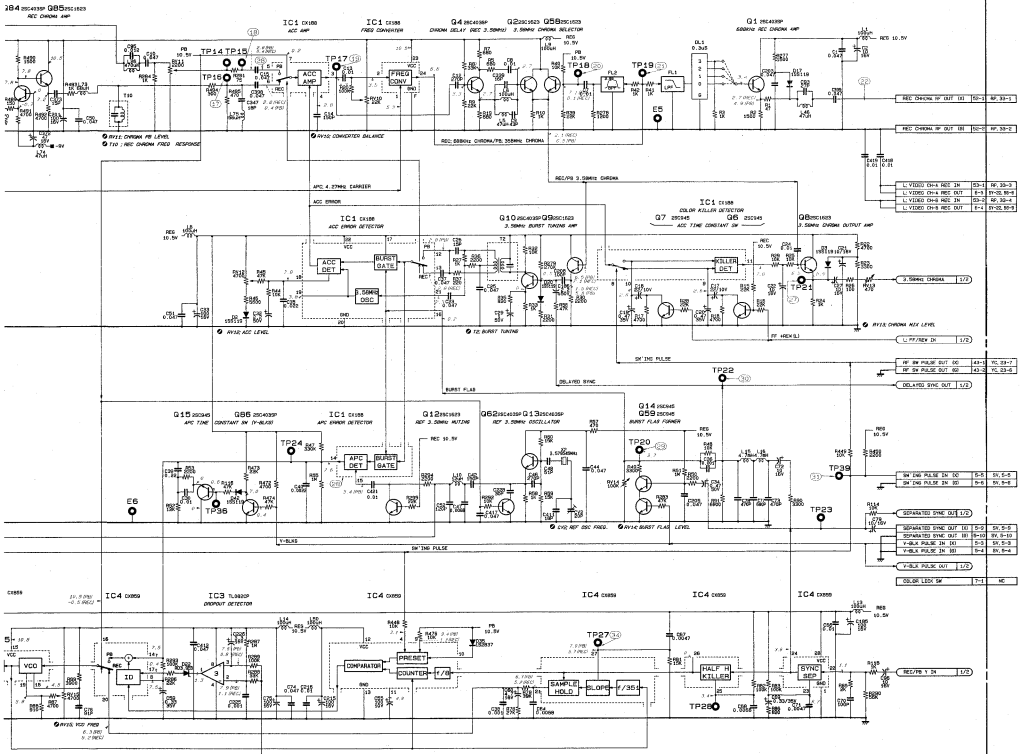
㉞ TP27



VO-11 (2/2) (CHROMA MOD/DEMOD)

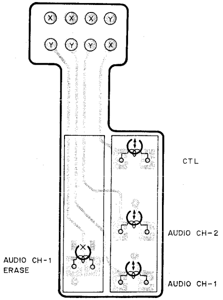
S/N 10331 AND LATER (UC)
S/N 10111 AND LATER (J)


YC, 23-2 | 44-2 | PB CHROMA RF IN (X)
YC, 23-3 | 44-3 | PB CHROMA RF IN (G)
1/2 | REC VIDEO IN
SY-18, 21-3 | 3-3 | H; BP MONITOR DET IN
DTC144EK
DU, 85-1 | 8-3 | H; BP MONITOR DET OUT
SY-18, 21-6 | 3-6 | H; CONFI EE IN
SV, 5-7 | 5-7 | H; REC FWD PAUSE IN
SV, 5-8 | 5-8 | GND
DRUM | 15-3 | REC +10.5V OUT
DRUM | 2-1 | CONFI VIDEO HEAD-A (X)
DRUM | 2-2 | CONFI VIDEO HEAD-A (G)
DRUM | 2-3 | CONFI VIDEO HEAD-B (X)
DRUM | 2-4 | CONFI VIDEO HEAD-B (G)
DRUM | 15-2 | GND
SY-22, 56-4 | 4-4 | CONFI Y OUT (X)
SY-22, 56-5 | 4-5 | CONFI Y OUT (G)
SY-22, 56-1 | 4-1 | CHARACTER GEN DATA IN
1/2 | LINE VIDEO IN
DU, 84-1 | 13-1 | CAMERA VIDEO OUT (X)
DU, 84-2 | 13-2 | CAMERA VIDEO OUT (G)
SY-22, 56-2 | 4-2 | CHARACTER GEN BACK IN
SY-22, 56-3 | 4-3 | GND
Q81 2SC1623
IC21 CX22013
Q82 2SC403SP PHASE EQ
IC23 CX20061 SYSTEM SW
Q84 2SC403SP
Q85 2SC1623 REC CHROMA AMP
TP29
TP30
VERTICAL CORRELATOR
HORIZONTAL CORRELATOR
DL11
E10
T10
RV16: Y/C SEP ADJ
RV11: CHROMA PB LEVEL
T10 : REC CHROMA FREQ
Q73, Q74 DTC144EKx2
Q75 DTA144EK
UNREG 12V
D44 1S2837
D37 1S2837
UNREG
IC21 CX22013
PRE AMP
GAIN CTL AMP
R463 4700
IC22 CX20061
IC25 HA12411
REC 10.5V
TP31
IF AMP
QUAD-RATURE DETECT
AFC AMP
AMP
OV SW
MUTE
LEVEL DET
MUTE DRIVE
TUNING METER DRIVER
E6
SW'ING PULSE
REF 3.58MHz
Q88 2SC1623
Q87 2SA812 CONFI VIDEO AMP
Q89 2SC403SP
IC24 TC4053BF CHARACTER DATA MIX
Q95 2SC1623
Q94 2SA812 CONFI VIDEO AMP
TP35
TP32
TP33
TP34
E2
FIXED
EN
L; BACK
RV17: CONFI VIDEO LEVEL
TP26
LV2
T1
T1, LV2; 4.27MHz TUNING
IC4 CX859
TP25
FREQ CONV
f/8
VCO
ID
E10
RV15: VCO FREQ
REG 10.5V
-9V


Q84 2SC403SP Q85 2SC1623
REC CHROMA AMP
IC1 CX188
ACC AMP
IC1 CX188
FREQ CONVERTER
Q4 2SC403SP
CHROMA DELAY (REC 3.58MHz)
Q2 2SC1623 Q58 2SC1623
3.58MHz CHROMA SELECTOR
Q1 2SC403SP
688KHz REC CHROMA AMP
TP14
TP15
TP16
TP17
TP18
TP19
E5
ACC AMP
FREQ CONV
FL2
BPF
FL1
LPF
DL1
0.3uS
RV11: CHROMA PB LEVEL
T10 ; REC CHROMA FREQ RESPONSE
RV10: CONVERTER BALANCE
REC: 688KHz CHROMA/PB: 358MHz CHROMA
APC: 4.27MHz CARRIER
ACC ERROR
REC/PB 3.58MHz CHROMA
REC CHROMA RF OUT (X) | 52-1 | RP, 33-1
REC CHROMA RF OUT (G) | 52-2 | RP, 33-2
L: VIDEO CH-A REC IN | 53-1 | RP, 33-3
L: VIDEO CH-A REC OUT | 6-3 | SY-22, 56-8
L: VIDEO CH-B REC IN | 53-2 | RP, 33-4
L: VIDEO CH-B REC OUT | 6-4 | SY-22, 56-9
IC1 CX188
ACC ERROR DETECTOR
Q10 2SC403SP Q9 2SC1623
3.58MHz BURST TUNING AMP
IC1 CX188
COLOR KILLER DETECTOR
Q7 2SC945 Q6 2SC945
ACC TIME CONSTANT SW
Q8 2SC1623
3.58MHz CHROMA OUTPUT AMP
ACC DET
BURST GATE
3.58MHz OSC
KILLER DET
TP21
RV12: ACC LEVEL
T2: BURST TUNING
RV13: CHROMA MIX LEVEL
3.58MHz CHROMA | 1/2
L: FF/REW IN | 1/2
SW'ING PULSE
RF SW PULSE OUT (X) | 43-1 | YC, 23-7
RF SW PULSE OUT (G) | 43-2 | YC, 23-6
TP22
DELAYED SYNC
DELAYED SYNC OUT | 1/2
BURST FLAG
Q15 2SC945
APC TIME
Q86 2SC403SP
CONSTANT SW (V-BLKG)
IC1 CX188
APC ERROR DETECTOR
Q12 2SC1623
REF 3.58MHz MUTING
Q62 2SC403SP Q13 2SC403SP
REF 3.58MHz OSCILLATOR
Q14 2SC945
Q59 2SC945
BURST FLAG FORMER
TP24
TP20
TP36
E6
APC DET
BURST GATE
TP39
TP23
CV2: REF OSC FREQ.
RV14: BURST FLAG LEVEL
SW'ING PULSE IN (X) | 5-5 | SV, 5-5
SW'ING PULSE IN (G) | 5-6 | SV, 5-6
SEPARATED SYNC OUT | 1/2
SEPARATED SYNC OUT (X) | 5-9 | SV, 5-9
SEPARATED SYNC OUT (G) | 5-10 | SV, 5-10
V-BLK PULSE IN (X) | 5-3 | SV, 5-3
V-BLK PULSE IN (G) | 5-4 | SV, 5-4
V-BLK PULSE OUT | 1/2
COLOR LOCK SW | 7-1 | NC
V-BLKG
SW'ING PULSE
CX859
IC4 CX859
IC3 TL082CP
DROPOUT DETECTOR
IC4 CX859
IC4 CX859
IC4 CX859
IC4 CX859
VCO
ID
COMPARATOR
PRESET
COUNTER
f/8
TP27
SAMPLE HOLD
SLOPE
f/351
HALF H KILLER
TP28
SYNC SEP
RV15: VCO FREQ
REC/PB Y IN | 1/2
DO PULSE IN | 1/2

VO-11 (2/2)
C MOD/DEMOD
1-611-951-13, 14, 15, 16
VO-6800

D -58 (AUDIO R/P/ERASE, CTL HEAD)

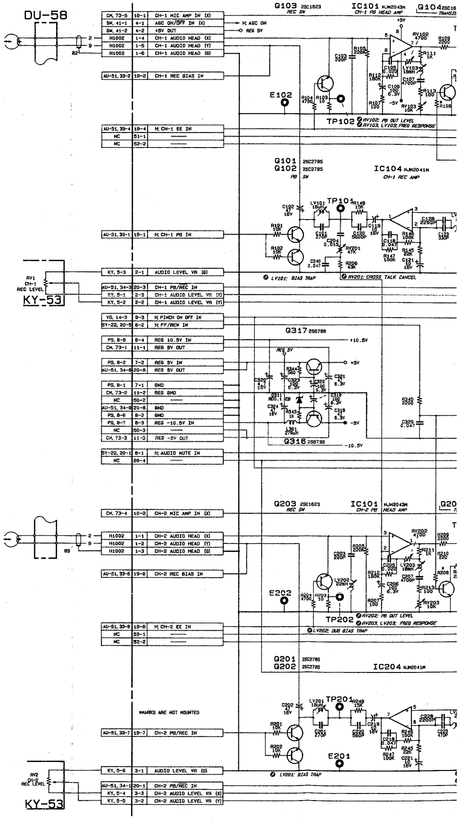

CTL
AUDIO CH-2
AUDIO CH-1 ERASE
AUDIO CH-1

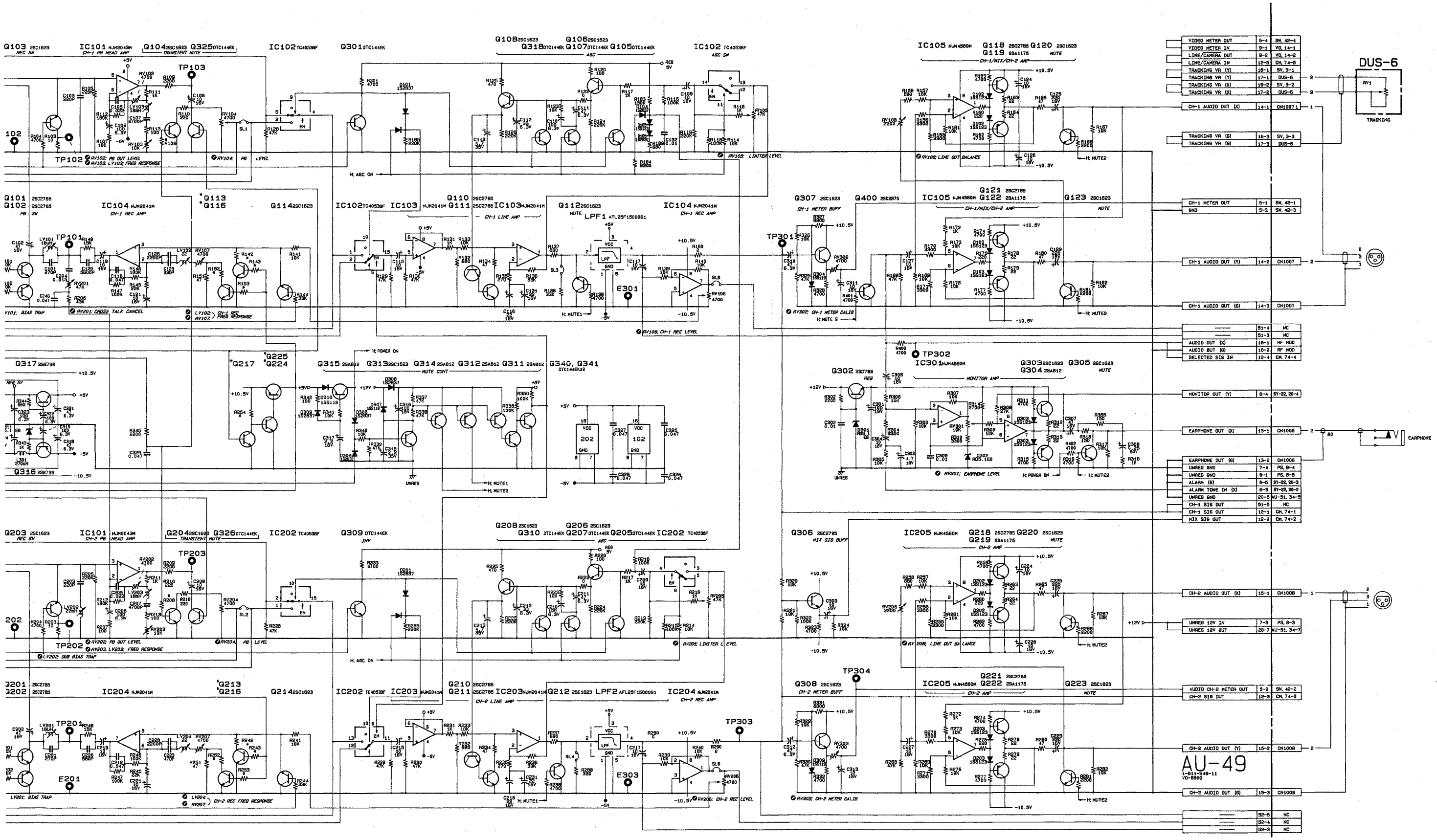
DU-58 -SOLDERING SIDE-

1-611-954-11,12
VO-6800

AU-49 (AUDIO REC/PB AMP)
DUS-6 (TRACKING VR)

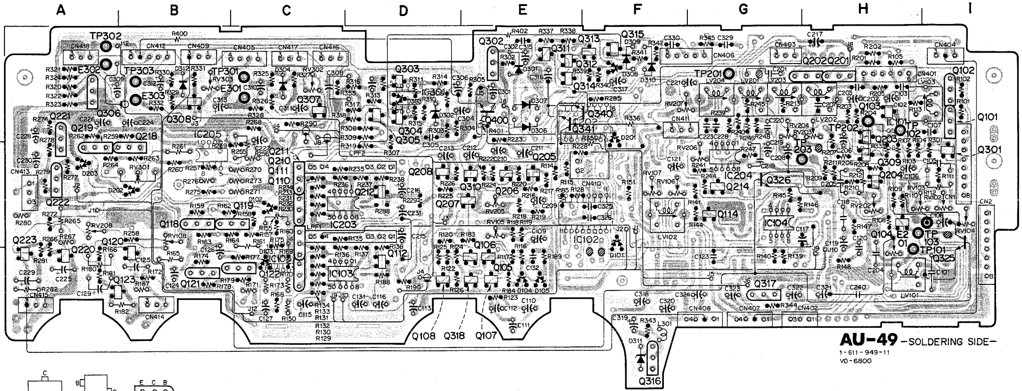
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


DU-58
Q103 2SC1623 REC SW
IC101 NJM2043M CH-1 PB HEAD AMP
Q104
CH-1 MIC AMP IN
AGC ON/OFF IN
+5V OUT
CH-1 AUDIO HEAD (X)
CH-1 AUDIO HEAD (Y)
CH-1 AUDIO HEAD (G)
CH-1 REC BIAS IN
E102
TP102
RV102: PB OUT LEVEL
RV103, LV103: FREQ RESPONSE
H: CH-1 EE IN
Q101 2SC2785
Q102 2SC2785 PB SW
IC104 NJM2041M CH-1 REC AMP
TP101
H: CH-1 PB IN
AUDIO LEVEL VR (G)
LV101: BIAS TRAP
RV201: CROSS TALK CANCEL
RV1 CH-1 REC LEVEL
KY-53
CH-1 PB/REC IN
CH-1 AUDIO LEVEL VR (X)
CH-1 AUDIO LEVEL VR (Y)
H: PINCH ON OFF IN
H: FF/REW IN
Q317 2SB788
REG 10.5V IN
REG 5V OUT
REG 5V IN
GND
REG GND
REG -10.5V IN
REG -5V OUT
Q316 2SB738
H: AUDIO MUTE IN
+10.5V
+5V
-5V
-10.5V
Q203 2SC1623 REC SW
IC101 NJM2043M CH-2 PB HEAD AMP
CH-2 MIC AMP IN
CH-2 AUDIO HEAD (X)
CH-2 AUDIO HEAD (Y)
CH-2 AUDIO HEAD (G)
CH-2 REC BIAS IN
E202
TP202
RV202: PB OUT LEVEL
RV203, LV203: FREQ RESPONSE
LV202: DUB BIAS TRAP
H: CH-2 EE IN
Q201 2SC2785
Q202 2SC2785
IC204 NJM2041M
TP201
*MARKS ARE NOT MOUNTED
CH-2 PB/REC IN
E201
LV201: BIAS TRAP
AUDIO LEVEL VR (G)
RV2 CH-2 REC LEVEL
CH-2 PB/REC IN
CH-2 AUDIO LEVEL VR (X)
CH-2 AUDIO LEVEL VR (Y)
KY-53

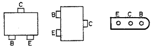

Q103 2SC1623 REC SW
IC101 NJM2043M CH-1 PB HEAD AMP
Q104 2SC1623 Q325 DTC144EK TRANSIENT MUTE
IC102 TC4053BF
Q301 DTC144EK
Q108 2SC1623 Q318 DTC144EK Q106 2SC1623 Q107 DTC144EK Q105 DTC144EK AGC
IC102 TC4053BF ASC SW
IC105 NJM4560M Q118 2SC2785 Q120 2SC1623 Q119 2SA1175 CH-1/MIX/CH-2 AMP MUTE
TP103
TP102
RV102: PB OUT LEVEL
RV103, LV103: FREQ RESPONSE
RV104: PB LEVEL
RV105: LIMITER LEVEL
RV108: LINE OUT BALANCE
H: AGC ON
H: MUTE2
Q101 2SC2785 Q102 2SC2785 PB SW
IC104 NJM2041M CH-1 REC AMP
Q113 Q116
Q114 2SC1623
IC102 TC4053BF IC103
Q110 2SC2785 Q111 2SC2785 IC103 NJM2041M CH-1 LINE AMP
Q112 2SC1623 MUTE
LPF1 AFL25F1500061
IC104 NJM2041M CH-1 REC AMP
Q307 2SC1623 CH-1 METER BUFF
Q400 2SC2875
IC105 NJM4560M Q121 2SC2785 Q122 2SA1175 CH-1/MIX/CH-2 AMP
Q123 2SC1623 MUTE
TP101
TP301
E301
LV101: BIAS TRAP
RV201: CROSS TALK CANCEL
LV102: CH-1 REC
RV107: FREQ RESPONSE
RV106: CH-1 REC LEVEL
RV302: CH-1 METER CALIB
H: MUTE1
H: MUTE 2
Q317 2SB798
Q316 2SB798
Q217 Q225 Q224
Q315 2SA812 Q313 2SC1623 Q314 2SA812 Q312 2SA812 Q311 2SA812 MUTE CONT
Q340, Q341 DTC144EKx2
H: POWER ON
UNREG
TP302
Q302 2SD788 REG
IC301 NJM4560M MONITOR AMP
Q303 2SC1623 Q305 2SC1623 Q304 2SA812 MUTE
RV301: EARPHONE LEVEL
Q203 2SC1623 REC SW
IC101 NJM2043M CH-2 PB HEAD AMP
Q204 2SC1623 Q326 DTC144EK TRANSIENT MUTE
IC202 TC4053BF
Q309 DTC144EK INV
Q208 2SC1623 Q310 DTC144EK Q206 2SC1623 Q207 DTC144EK Q205 DTC144EK IC202 TC4053BF AGC
Q306 2SC2785 MIX SIG BUFF
IC205 NJM4560M Q218 2SC2785 Q220 2SC1623 Q219 2SA1175 CH-2 AMP MUTE
TP203
TP202
RV202: PB OUT LEVEL
RV203, LV203: FREQ RESPONSE
LV202: DUB BIAS TRAP
RV204: PB LEVEL
RV205: LIMITER LEVEL
RV208: LINE OUT BALANCE
Q201 2SC2785 Q202 2SC2785
IC204 NJM2041M
Q213 Q216
Q214 2SC1623
IC202 TC4053BF IC203 NJM2041M
Q210 2SC2785 Q211 2SC2785 IC203 NJM2041M CH-2 LINE AMP
Q212 2SC1623 LPF2 AFL25F1500061
IC204 NJM2041M CH-2 REC AMP
TP304
Q308 2SC1623 CH-2 METER BUFF
IC205 NJM4560M Q221 2SC2785 Q222 2SA1175 CH-2 AMP
Q223 2SC1623 MUTE
TP201
E201
TP303
E303
LV201: BIAS TRAP
LV204, RV207: CH-2 REC FREQ RESPONSE
RV206: CH-2 REC LEVEL
RV303: CH-2 METER CALIB
VIDEO METER OUT 5-4 SW, 42-4
VIDEO METER IN 9-1 VO, 14-1
LINE/CAMERA OUT 9-2 VO, 14-2
LINE/CAMERA IN 12-5 CM, 74-5
TRACKING VR (Y) 16-1 SV, 3-1
TRACKING VR (Y) 17-1 DUS-6
TRACKING VR (X) 16-2 SV, 3-2
TRACKING VR (X) 17-2 DUS-6
CH-1 AUDIO OUT (X) 14-1 CN1007
TRACKING VR (G) 16-3 SV, 3-3
TRACKING VR (G) 17-3 DUS-6
DUS-6
RV1
TRACKING
CH-1 METER OUT 5-1 SW, 42-1
GND 5-3 SW, 42-3
CH-1 AUDIO OUT (Y) 14-2 CN1007
CH-1 AUDIO OUT (G) 14-3 CN1007
51-4 NC
51-3 NC
AUDIO OUT (X) 18-1 RF MOD
AUDIO OUT (G) 18-2 RF MOD
SELECTED SIG IN 12-4 CM, 74-4
MONITOR OUT (Y) 8-4 SY-22, 20-4
EARPHONE OUT (X) 13-1 CN1006
80
EARPHONE
EARPHONE OUT (G) 13-2 CN1006
UNREG GND 7-4 PS, 8-4
UNREG GND 8-1 PS, 8-5
ALARM (G) 6-5 SY-22, 20-3
ALARM TONE IN (X) 6-3 SY-22, 20-2
UNREG GND 20-5 AU-51, 34-5
CH-1 SIG OUT 51-5 NC
CH-1 SIG OUT 12-1 CM, 74-1
MIX SIG OUT 12-2 CM, 74-2
CH-2 AUDIO OUT (X) 15-1 CN1008
+12V
UNREG 12V IN 7-3 PS, 8-3
UNREG 12V OUT 20-7 AU-51, 34-7
AUDIO CH-2 METER OUT 5-2 SW, 42-2
CH-2 SIG OUT 12-3 CM, 74-3
CH-2 AUDIO OUT (Y) 15-2 CN1008
AU-49
1-611-949-11
VO-8800
CH-2 AUDIO OUT (G) 15-3 CN1008
52-5 NC
52-4 NC
52-3 NC

AU-49 (AUDIO REC/PB AMP)

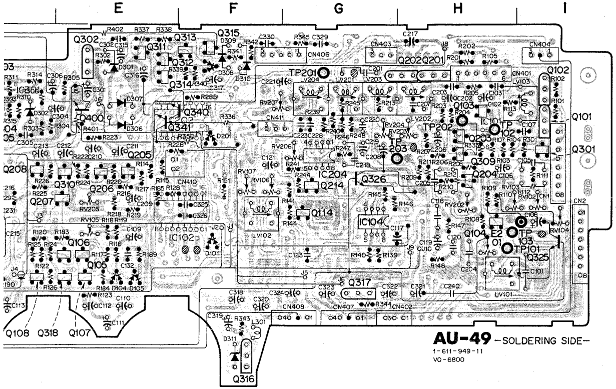
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)



AU-49 -SOLDERING SIDE-
1-611-949-11
V0-6800



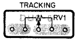
CN1	I - 2
CN2	I - 2
CN401	H - 1
CN402	H - 3
CN403	G - 1
CN404	I - 1
CN405	C - 1
CN406	G - 1
CN407	G - 3
CN408	G - 3
CN409	B - 1
CN410	F - 2
CN411	F - 1
CN412	B - 1
CN413	A - 2
CN414	B - 3
CN415	A - 3
CN416	C - 1
CN417	C - 1
CN418	A - 1
D101	F - 2
D102	C - 2
D103	C - 3
D104	E - 3
D105	E - 3
D201	F - 1
D202	B - 2
D203	A - 2
D301	E - 1
D302	D - 1
D303	D - 1
D304	C - 1
D305	E - 1
D306	E - 1
D307	E - 1
D308	F - 1
D309	F - 1
D310	F - 1
D311	F - 3
D312	B - 1
E201	H - 2
E301	C - 1
E302	A - 1
E303	B - 1
IC101	H - 2
IC102	F - 2
IC103	C - 3
IC104	G - 2
IC105	C - 3
IC202	F - 1
IC203	C - 2
IC204	G - 2
IC205	B - 2
LV101	H - 3
LV102	F - 2
LV103	I - 1
LV201	G - 1
LV202	H - 1
LV203	G - 1
LV204	G - 1
Q101	I - 1
Q102	I - 1
Q103	H - 1
Q104	H - 2
Q105	E - 3
Q106	E - 3
Q107	E - 3
Q108	D - 3
Q110	C - 3
Q111	C - 2
Q112	D - 3
Q114	G - 2
Q118	B - 2
Q119	C - 2
Q120	B - 3
Q121	B - 3
Q122	C - 3
Q123	B - 3
Q201	H - 1
Q202	H - 1
Q203	H - 1
Q204	H - 2
Q205	E - 2
Q206	E - 2
Q207	E - 2
Q208	D - 2
Q210	C - 2
Q211	C - 2
Q212	D - 2
Q214	G - 2
Q218	B - 2
Q219	A - 2
Q220	A - 3
Q221	A - 1
Q222	A - 2
Q223	A - 3
Q301	I - 2
Q302	E - 1
Q303	D - 1
Q304	D - 1
Q305	D - 1
Q306	A - 1
Q307	C - 1
Q308	B - 1
Q309	H - 2
Q310	E - 2
Q311	E - 1
Q312	E - 1
Q313	F - 1
Q314	E - 1
Q315	F - 1
Q316	F - 3
Q317	G - 3
Q318	E - 3
Q325	I - 2
Q326	G - 2
Q340	E - 1
Q341	E - 1
Q400	E - 1
RV102	I - 2
RV103	H - 2
RV104	I - 2
RV105	E - 2
RV106	F - 2
RV107	F - 2
RV108	B - 2
RV201	H - 3
RV202	H - 2
RV203	H - 1
RV204	G - 1
RV205	E - 2
RV206	G - 2
RV207	F - 1
RV208	A - 2
RV301	B - 2
RV302	C - 1
RV303	B - 1
TP101	H - 3
TP102	H - 1
TP103	I - 2
TP201	G - 1
TP202	H - 1
TP203	H - 2
TP301	C - 1
TP302	A - 1
TP303	B - 1


E
F
G
H
I
Q302
Q311
Q313
Q312
Q314
Q315
Q340
Q341
Q400
Q205
Q208
Q310
Q206
Q207
Q106
Q105
Q108
Q318
Q107
Q316
Q317
Q326
Q214
Q114
Q202
Q201
Q103
Q203
Q309
Q204
Q104
Q102
Q101
Q301
Q325
IC102
IC104
IC204
IC101
TP201
TP202
TP203
TP102
TP103
TP101
CN401
CN402
CN403
CN404
CN406
CN407
CN408
CN410
CN411
CN1
CN2
LV101
LV102
LV103
LV201
LV202
LV203
LV204
L301
D311

AU-49 -SOLDERING SIDE-
1-611-949-11
VO-6800

Q313	F - 1
Q314	E - 1
Q315	F - 1
Q316	F - 3
Q317	G - 3
Q318	E - 3
Q325	I - 2
Q326	G - 2
Q340	E - 1
Q341	E - 1
Q400	E - 1
RV102	I - 2
RV103	H - 2
RV104	I - 2
RV105	E - 2
RV106	F - 2
RV107	F - 2
RV108	B - 2
RV201	H - 3
RV202	H - 2
RV203	H - 1
RV204	G - 1
RV205	E - 2
RV206	G - 2
RV207	F - 1
RV208	A - 2
RV301	B - 2
RV302	C - 1
RV303	B - 1
TP101	H - 3
TP102	H - 1
TP103	I - 2
TP201	G - 1
TP202	H - 1
TP203	H - 2
TP301	C - 1
TP302	A - 1
TP303	B - 1

DUS-6 (TRACKING VR)


TRACKING
RV1

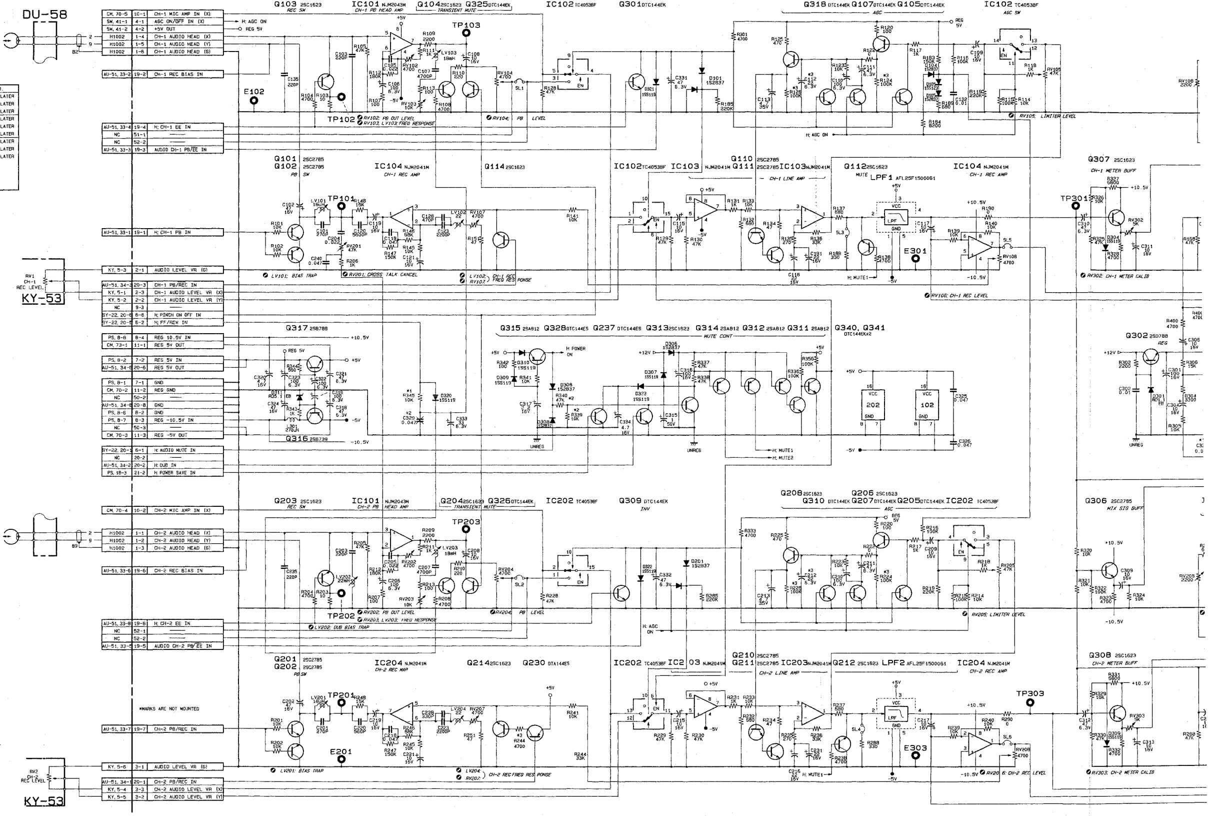
DUS-6
-SOLDERING SIDE-
1-611-965-11,12
VO-6800

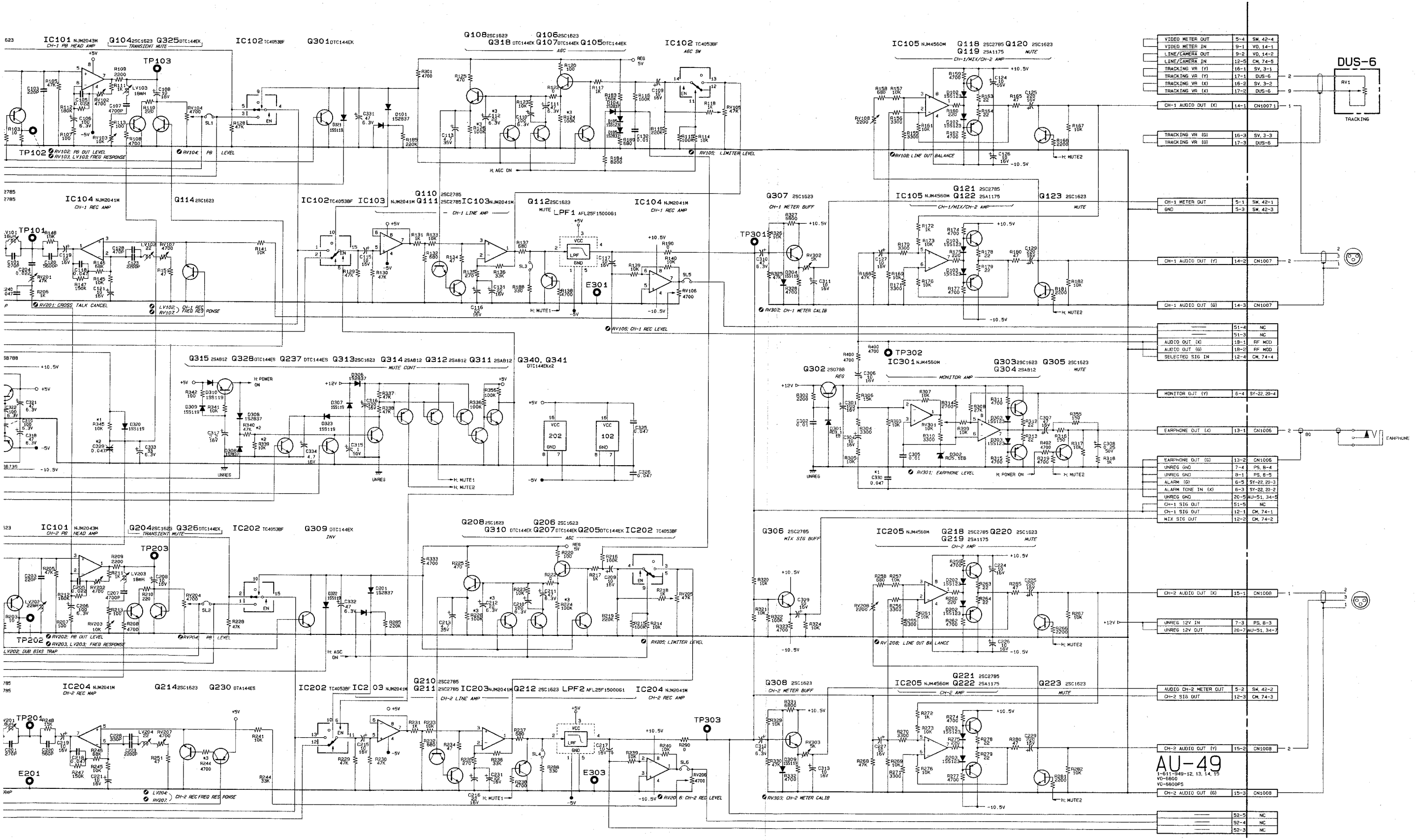
AU-49 (AUDIO REC/PB AMP)
DUS-6 (TRACKING VR)

S/N 10031 TO 13480 (UC)
S/N 10011 TO 10660 (J)

NOTE:

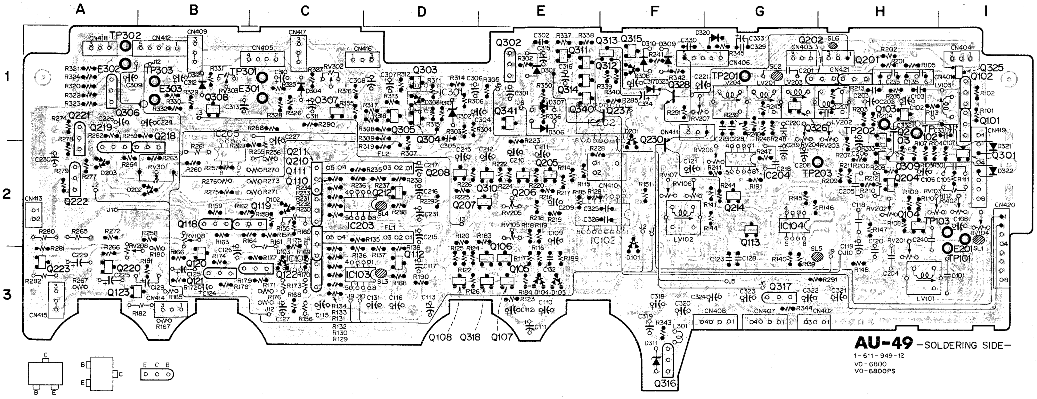
MARK	CHANGE INFORMATION	SERIAL NO.
*1	C330 0.047 ADDED R345 2200 → 10K	UC; 10331 AND LATER J ; 10111 AND LATER EK; 10121 AND LATER
*2	C329 0.047 DELETED R339 47K → 10K R340 10K → 47K	UC; 10631 AND LATER J ; 10261 AND LATER EK; 10521 AND LATER
*3	C112, C212 33/6.3V → 22/5.3V R124, R224, R126, R226 220K → 100K R244 33K → 4700	UC; 11581 AND LATER J ; 10361 AND LATER EK; 11621 AND LATER


DU-58
CM, 70-5 | 10-1 | CH-1 MIC AMP IN (X)
SW, 41-1 | 4-1 | AGC ON/OFF IN (X)
SW, 41-2 | 4-2 | +5V OUT
H1002 | 1-4 | CH-1 AUDIO HEAD (X)
H1002 | 1-5 | CH-1 AUDIO HEAD (Y)
H1002 | 1-6 | CH-1 AUDIO HEAD (G)
H: AGC ON
REG 5V
B2
AU-51, 33-2 | 19-2 | CH-1 REC BIAS IN
AU-51, 33-4 | 19-4 | H: CH-1 EE IN
NC | 51-1 | ——
NC | 52-2 | ——
AU-51, 33-3 | 19-3 | AUDIO CH-1 PB/EE IN
AU-51, 33-1 | 19-1 | H: CH-1 PB IN
KY, 5-3 | 2-1 | AUDIO LEVEL VR (G)
AU-51, 34-3 | 20-3 | CH-1 PB/REC IN
KY, 5-1 | 2-3 | CH-1 AUDIO LEVEL VR (X)
KY, 5-2 | 2-2 | CH-1 AUDIO LEVEL VR (Y)
NC | 9-3 | ——
SY-22, 20-6 | 6-6 | H: PINCH ON OFF IN
SY-22, 20-5 | 6-2 | H: FF/REW IN
PS, 8-8 | 8-4 | REG 10.5V IN
CM, 73-1 | 11-1 | REG 5V OUT
PS, 8-2 | 7-2 | REG 5V IN
AU-51, 34-6 | 20-6 | REG 5V OUT
PS, 8-1 | 7-1 | GND
CM, 70-2 | 11-2 | REG GND
NC | 50-2 | ——
AU-51, 34-8 | 20-8 | GND
PS, 8-6 | 8-2 | GND
PS, 8-7 | 8-3 | REG -10.5V IN
NC | 50-3 | ——
CM, 70-3 | 11-3 | REG -5V OUT
SY-22, 20-1 | 6-1 | H: AUDIO MUTE IN
NC | 20-2 | ——
AU-51, 34-2 | 20-2 | H: DUB IN
PS, 18-3 | 21-2 | H: POWER SAVE IN
CM, 70-4 | 10-2 | CH-2 MIC AMP IN (X)
H1002 | 1-1 | CH-2 AUDIO HEAD (X)
H1002 | 1-2 | CH-2 AUDIO HEAD (Y)
H1002 | 1-3 | CH-2 AUDIO HEAD (G)
89
AU-51, 33-6 | 19-6 | CH-2 REC BIAS IN
AU-51, 33-8 | 19-8 | H: CH-2 EE IN
NC | 52-1 | ——
NC | 52-2 | ——
AU-51, 33-5 | 19-5 | AUDIO CH-2 PB/EE IN
*MARKS ARE NOT MOUNTED
AU-51, 33-7 | 19-7 | CH-2 PB/REC IN
KY, 5-6 | 3-1 | AUDIO LEVEL VR (G)
AU-51, 34-1 | 20-1 | CH-2 PB/REC IN
KY, 5-4 | 3-3 | CH-2 AUDIO LEVEL VR (X)
KY, 5-5 | 3-2 | CH-2 AUDIO LEVEL VR (Y)
RV1 CH-1 REC LEVEL
KY-53
RV2 CH-2 REC LEVEL
KY-53
Q103 2SC1623 REC SW
IC101 NJM2043M CH-1 PB HEAD AMP
Q104 2SC1623 Q325 DTC144EK TRANSIENT MUTE
IC102 TC4053BF
Q301 DTC144EK
Q108 2SC1623 Q106 2SC1623
Q318 DTC144EK Q107 DTC144EK Q105 DTC144EK AGC
IC102 TC4053BF AGC SW
TP103
E102
TP102
RV102: PB OUT LEVEL
RV103, LV103: FREQ RESPONSE
RV104: PB LEVEL
RV105: LIMITER LEVEL
H: AGC ON
Q101 2SC2785
Q102 2SC2785 PB SW
IC104 NJM2041M CH-1 REC AMP
Q114 2SC1623
IC102 TC4053BF IC103 NJM2041M
Q110 2SC2785
Q111 2SC2785 IC103 NJM2041M CH-1 LINE AMP
Q112 2SC1623 MUTE
LPF1 AFL25F1500061
IC104 NJM2041M CH-1 REC AMP
TP101
E301
LV101: BIAS TRAP
RV201: CROSS TALK CANCEL
LV102, RV107: CH-1 REC FREQ RESPONSE
H: MUTE1
RV106: CH-1 REC LEVEL
Q307 2SC1623 CH-1 METER BUFF
TP301
RV302: CH-1 METER CALIB
Q317 2SB788
Q316 2SB738
Q315 2SA812 Q328 DTC144ES Q237 DTC144ES Q313 2SC1623 Q314 2SA812 Q312 2SA812 Q311 2SA812 MUTE CONT
Q340, Q341 DTC144EKx2
H: POWER ON
H: MUTE1
H: MUTE2
UNREG
Q302 2SD788 REG
Q203 2SC1623 REC SW
IC101 NJM2043M CH-2 PB HEAD AMP
Q204 2SC1623 Q326 DTC144EK TRANSIENT MUTE
IC202 TC4053BF
Q309 DTC144EK INV
Q208 2SC1623 Q206 2SC1623
Q310 DTC144EK Q207 DTC144EK Q205 DTC144EK IC202 TC4053BF AGC
Q306 2SC2785 MIX SIG BUFF
TP203
TP202
RV202: PB OUT LEVEL
RV203, LV203: FREQ RESPONSE
LV202: DUB BIAS TRAP
RV204: PB LEVEL
H: AGC ON
RV205: LIMITER LEVEL
Q201 2SC2785
Q202 2SC2785 PB SW
IC204 NJM2041M CH-2 REC AMP
Q214 2SC1623 Q230 DTA144ES
IC202 TC4053BF IC203 NJM2041M
Q210 2SC2785
Q211 2SC2785 IC203 NJM2041M CH-2 LINE AMP
Q212 2SC1623
LPF2 AFL25F1500061
IC204 NJM2041M CH-2 REC AMP
Q308 2SC1623 CH-2 METER BUFF
TP201
E201
TP303
E303
LV201: BIAS TRAP
LV204, RV207: CH-2 REC FREQ RESPONSE
H: MUTE1
RV206: CH-2 REC LEVEL
RV303: CH-2 METER CALIB


IC101 NJM2043M CH-1 PB HEAD AMP
Q104 2SC1623 Q325 DTC144EK TRANSIENT MUTE
IC102 TC4053BF
Q301 DTC144EK
Q108 2SC1623 Q106 2SC1623
Q318 DTC144EK Q107 DTC144EK Q105 DTC144EK
AGC
IC102 TC4053BF AGC SW
IC105 NJM4560M Q118 2SC2785 Q120 2SC1623
Q119 2SA1175 MUTE
CH-1/MIX/CH-2 AMP
TP103
TP102
RV102: PB OUT LEVEL
RV103, LV103: FREQ RESPONSE
RV104: PB LEVEL
RV105: LIMITER LEVEL
RV108: LINE OUT BALANCE
H: AGC ON
H: MUTE2
IC104 NJM2041M CH-1 REC AMP
Q114 2SC1623
IC102 TC4053BF IC103 NJM2041M
Q110 2SC2785
Q111 2SC2785 IC103 NJM2041M CH-1 LINE AMP
Q112 2SC1623 MUTE
LPF1 AFL25F1500G1
IC104 NJM2041M CH-1 REC AMP
Q307 2SC1623 CH-1 METER BUFF
Q121 2SC2785
IC105 NJM4560M Q122 2SA1175
Q123 2SC1623 MUTE
TP101
TP301
E301
RV201: CROSS TALK CANCEL
LV102, RV107: CH-1 REC FREQ RESPONSE
RV106: CH-1 REC LEVEL
RV302: CH-1 METER CALIB
H: MUTE1
Q315 2SA812 Q328 DTC144ES Q237 DTC144ES Q313 2SC1623 Q314 2SA812 Q312 2SA812 Q311 2SA812
MUTE CONT
Q340, Q341 DTC144EKx2
H: POWER ON
UNREG
H: MUTE1
H: MUTE2
TP302
Q302 2SC788 REG
IC301 NJM4560M
Q303 2SC1623 Q305 2SC1623
Q304 2SA812 MUTE
MONITOR AMP
RV301: EARPHONE LEVEL
H: POWER ON
IC101 NJM2043M CH-2 PB HEAD AMP
Q204 2SC1623 Q326 DTC144EK TRANSIENT MUTE
IC202 TC4053BF
Q309 DTC144EK INV
Q208 2SC1623 Q206 2SC1623
Q310 DTC144EK Q207 DTC144EK Q205 DTC144EK IC202 TC4053BF
AGC
Q306 2SC2785 MIX SIG BUFF
IC205 NJM4560M Q218 2SC2785 Q220 2SC1623
Q219 2SA1175 MUTE
CH-2 AMP
TP203
TP202
RV202: PB OUT LEVEL
RV203, LV203: FREQ RESPONSE
LV202: DUB BIAS TRAP
RV204: PB LEVEL
RV205: LIMITER LEVEL
RV208: LINE OUT BALANCE
H: ASC ON
IC204 NJM2041M CH-2 REC AMP
Q214 2SC1623 Q230 DTA144ES
IC202 TC4053BF IC203 NJM2041M
Q210 2SC2785
Q211 2SC2785 IC203 NJM2041M CH-2 LINE AMP
Q212 2SC1623 LPF2 AFL25F1500G1
IC204 NJM2041M CH-2 REC AMP
TP303
Q308 2SC1623 CH-2 METER BUFF
Q221 2SC2785
IC205 NJM4560M Q222 2SA1175 CH-2 AMP
Q223 2SC1623 MUTE
TP201
E201
E303
LV204, RV207: CH-2 REC FREQ RESPONSE
RV206: CH-2 REC LEVEL
RV303: CH-2 METER CALIB
VIDEO METER OUT 5-4 SW, 42-4
VIDEO METER IN 9-1 VD, 14-1
LINE/CAMERA OUT 9-2 VD, 14-2
LINE/CAMERA IN 12-5 CM, 74-5
TRACKING VR (Y) 16-1 SV, 3-1
TRACKING VR (Y) 17-1 DUS-6
TRACKING VR (X) 16-2 SV, 3-2
TRACKING VR (X) 17-2 DUS-6
CH-1 AUDIO OUT (X) 14-1 CN1007
TRACKING VR (G) 16-3 SV, 3-3
TRACKING VR (G) 17-3 DUS-6
DUS-6
RV1
TRACKING
CH-1 METER OUT 5-1 SW, 42-1
GND 5-3 SW, 42-3
CH-1 AUDIO OUT (Y) 14-2 CN1007
CH-1 AUDIO OUT (G) 14-3 CN1007
51-4 NC
51-3 NC
AUDIO OUT (X) 18-1 RF MOD
AUDIO OUT (G) 18-2 RF MOD
SELECTED SIG IN 12-4 CM, 74-4
MONITOR OUT (Y) 6-4 SY-22, 20-4
EARPHONE OUT (X) 13-1 CN1006
EARPHONE
EARPHONE OUT (G) 13-2 CN1006
UNREG GND 7-4 PS, 8-4
UNREG GND 8-1 PS, 8-5
ALARM (G) 6-5 SY-22, 20-3
ALARM TONE IN (X) 6-3 SY-22, 20-2
UNREG GND 20-5 AU-51, 34-5
CH-1 SIG OUT 51-5 NC
CH-1 SIG OUT 12-1 CM, 74-1
MIX SIG OUT 12-2 CM, 74-2
CH-2 AUDIO OUT (X) 15-1 CN1008
UNREG 12V IN 7-3 PS, 8-3
UNREG 12V OUT 20-7 AU-51, 34-7
AUDIO CH-2 METER OUT 5-2 SW, 42-2
CH-2 SIG OUT 12-3 CM, 74-3
CH-2 AUDIO OUT (Y) 15-2 CN1008
AU-49
1-611-949-12, 13, 14, 15
VO-6800
VO-6800PS
CH-2 AUDIO OUT (G) 15-3 CN1008
52-5 NC
52-4 NC
52-3 NC

AU-49 (AUDIO REC/PB AMP)

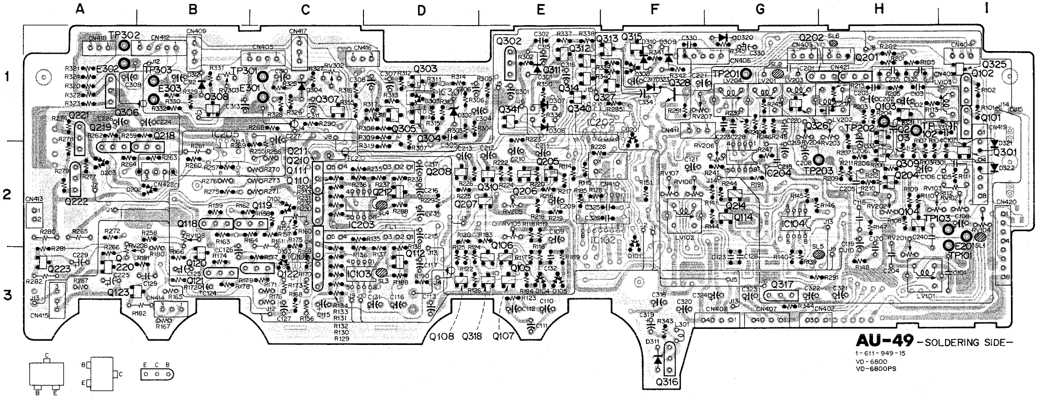
S/N 10031 TO 10630 (UC)
S/N 10011 TO 10260 (J)


A
B
C
D
E
F
G
H
I
1
2
3
CN418
TP302
CN412
CN409
CN405
CN417
CN416
Q302
Q313
Q315
Q202
Q201
Q325
Q102
Q101
Q301
E302
TP303
E303
TP301
E301
Q303
IC301
Q311
Q312
Q314
Q340
Q341
Q237
Q328
TP201
TP202
TP203
Q326
Q103
Q221
Q219
Q218
Q306
Q308
Q307
Q305
Q304
IC205
Q211
Q210
Q111
Q110
Q208
Q205
Q206
Q310
Q207
IC102
IC204
Q230
Q309
Q204
Q214
IC104
Q113
Q104
TP103
E201
TP101
Q222
Q118
Q119
IC203
Q212
Q106
Q105
IC101
Q223
Q220
Q120
Q121
Q122
IC105
IC103
Q112
Q123
Q317
LV101
LV102
CN413
CN415
CN414
CN408
CN407
CN402
CN420
Q108
Q318
Q107
Q316
C
B
E
E C B

AU-49 -SOLDERING SIDE-
1-611-949-12
VO-6800
VO-6800PS

CN401	H - 1	D101	F - 2	E201	I - 2	LV101	H - 3	Q122	C - 3	Q303	D - 1	RV102	I - 2	TP101	I - 3
CN402	H - 3	D102	C - 2	E301	C - 1	LV102	F - 2	Q123	B - 3	Q304	D - 1	RV103	H - 2	TP102	H - 1
CN403	G - 1	D103	C - 3	E302	A - 1	LV103	I - 1	Q201	H - 1	Q305	D - 1	RV104	I - 2	TP103	I - 2
CN404	I - 1	D104	E - 3	E303	B - 1	LV201	G - 1	Q202	H - 1	Q306	A - 1	RV105	E - 2	TP201	G - 1
CN405	C - 1	D105	E - 3			LV202	H - 1	Q203	H - 1	Q307	C - 1	RV106	F - 2	TP202	H - 1
CN406	G - 1	D201	F - 1	FL1	D - 2	LV203	G - 1	Q204	H - 2	Q308	B - 1	RV107	F - 2	TP203	H - 2
CN407	G - 3	D202	B - 2	FL2	D - 2	LV204	G - 1	Q205	E - 2	Q309	H - 2	RV108	B - 2	TP301	C - 1
CN408	G - 3	D203	A - 2					Q206	E - 2	Q310	E - 2	RV201	H - 3	TP302	A - 1
CN409	B - 1	D301	E - 1	IC101	H - 2	Q101	I - 1	Q207	E - 2	Q311	E - 1	RV202	H - 2	TP303	B - 1
CN410	F - 2	D302	D - 1	IC102	F - 2	Q102	I - 1	Q208	D - 2	Q312	E - 1	RV203	H - 1		
CN411	F - 1	D303	D - 1	IC103	C - 3	Q103	H - 1	Q210	C - 2	Q313	F - 1	RV204	G - 1		
CN412	B - 1	D304	C - 1	IC104	G - 2	Q104	H - 2	Q211	C - 2	Q314	E - 1	RV205	E - 2		
CN413	A - 2	D306	E - 1	IC105	C - 3	Q105	E - 3	Q212	D - 2	Q315	F - 1	RV206	G - 2		
CN414	B - 3	D307	E - 1	IC202	F - 1	Q106	E - 3	Q214	G - 2	Q316	F - 3	RV207	F - 1		
CN415	A - 3	D308	F - 1	IC203	C - 2	Q107	E - 3	Q218	B - 2	Q317	G - 3	RV208	A - 3		
CN416	C - 1	D309	F - 1	IC204	G - 2	Q108	D - 3	Q219	A - 2	Q318	E - 3	RV301	B - 2		
CN417	C - 1	D310	F - 1	IC205	B - 2	Q110	C - 3	Q220	A - 3	Q325	I - 1	RV302	C - 1		
CN418	A - 1	D311	F - 3	IC301	D - 1	Q111	C - 2	Q221	A - 1	Q326	G - 1	RV303	B - 1		
CN419	I - 2	D312	B - 1			Q112	D - 3	Q222	A - 2	Q328	F - 1				
CN420	I - 2	D320	G - 1			Q113	G - 2	Q223	A - 3	Q340	E - 1				
CN421	H - 1	D321	I - 2			Q118	B - 2	Q230	F - 2	Q341	E - 1				
		D322	I - 2			Q119	C - 2	Q237	F - 1						
		D323	F - 1			Q120	B - 3	Q301	I - 2						
						Q121	B - 3	Q302	E - 1						

S/N 10631 TO 13480 (UC)
S/N 10261 TO 10660 (J)



AU-49 -SOLDERING SIDE-
1-611-949-15
VO-6800
VO-6800PS

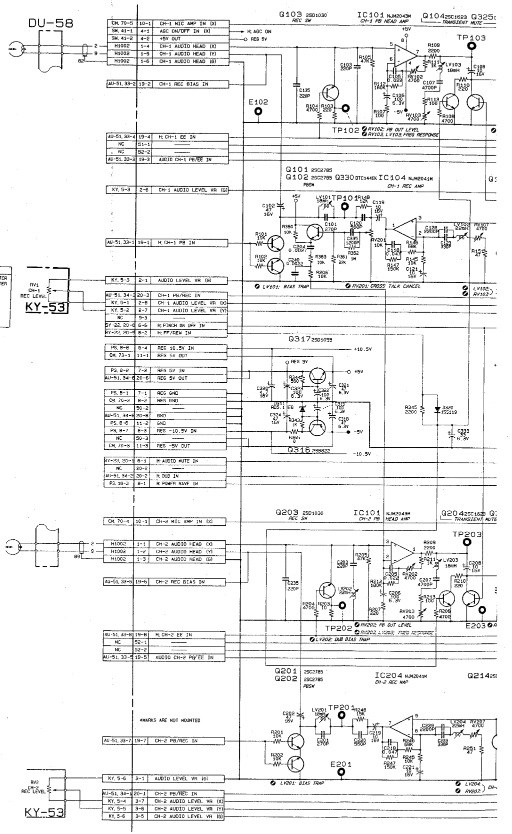
CN401	H - 1
CN402	H - 3
CN403	G - 1
CN404	I - 1
CN405	C - 1
CN406	G - 1
CN407	G - 3
CN408	G - 3
CN409	B - 1
CN410	F - 2
CN411	F - 1
CN412	B - 1
CN413	A - 2
CN414	B - 3
CN415	A - 3
CN416	C - 1
CN417	C - 1
CN418	A - 1
CN419	I - 2
CN420	I - 2
CN421	H - 1
CN422	B - 2
D101	F - 2
D102	C - 2
D103	C - 3
D104	E - 3
D105	E - 3
D201	F - 1
D202	B - 2
D203	A - 2
D301	E - 1
D302	D - 1
D303	D - 1
D304	C - 1
D306	E - 1
D307	E - 1
D308	F - 1
D309	F - 1
D310	F - 1
D311	F - 3
D312	B - 1
D320	G - 1
D321	I - 2
D322	I - 2
D323	F - 1
E201	I - 2
E301	C - 1
E302	A - 1
E303	B - 1
FL1	D - 2
FL2	D - 2
IC101	H - 2
IC102	F - 2
IC103	C - 3
IC104	G - 2
IC105	C - 3
IC202	F - 1
IC203	C - 2
IC204	G - 2
IC205	B - 2
IC301	D - 1
LV101	H - 3
LV102	F - 2
LV103	I - 1
LV201	G - 1
LV202	H - 1
LV203	G - 1
LV204	G - 1
Q101	I - 1
Q102	I - 1
Q103	H - 1
Q104	H - 2
Q105	E - 3
Q106	E - 3
Q107	E - 3
Q108	D - 3
Q110	C - 3
Q111	C - 2
Q112	D - 3
Q114	G - 2
Q118	B - 2
Q119	C - 2
Q120	B - 3
Q121	B - 3
Q122	C - 3
Q123	B - 3
Q201	H - 1
Q202	H - 1
Q203	H - 1
Q204	H - 2
Q205	E - 2
Q206	E - 2
Q207	E - 2
Q208	D - 2
Q210	C - 2
Q211	C - 2
Q212	D - 2
Q214	G - 2
Q218	B - 2
Q219	A - 2
Q220	A - 3
Q221	A - 1
Q222	A - 2
Q223	A - 3
Q301	I - 2
Q302	E - 1
Q303	D - 1
Q304	D - 1
Q305	D - 1
Q306	A - 1
Q307	C - 1
Q308	B - 1
Q309	H - 2
Q310	E - 2
Q311	E - 1
Q312	E - 1
Q313	F - 1
Q314	E - 1
Q315	F - 1
Q316	F - 3
Q317	G - 3
Q318	E - 3
Q325	I - 1
Q326	G - 1
Q327	F - 1
Q328	F - 1
Q340	E - 1
Q341	E - 1
RV102	I - 2
RV103	H - 2
RV104	I - 2
RV105	E - 2
RV106	F - 2
RV107	F - 2
RV108	B - 2
RV201	H - 3
RV202	H - 2
RV203	H - 1
RV204	G - 1
RV205	E - 2
RV206	G - 2
RV207	F - 1
RV208	A - 3
RV301	B - 2
RV302	C - 1
RV303	B - 1
TP101	I - 3
TP102	H - 1
TP103	I - 2
TP201	G - 1
TP202	H - 1
TP203	H - 2
TP301	C - 1
TP302	A - 1
TP303	B - 1

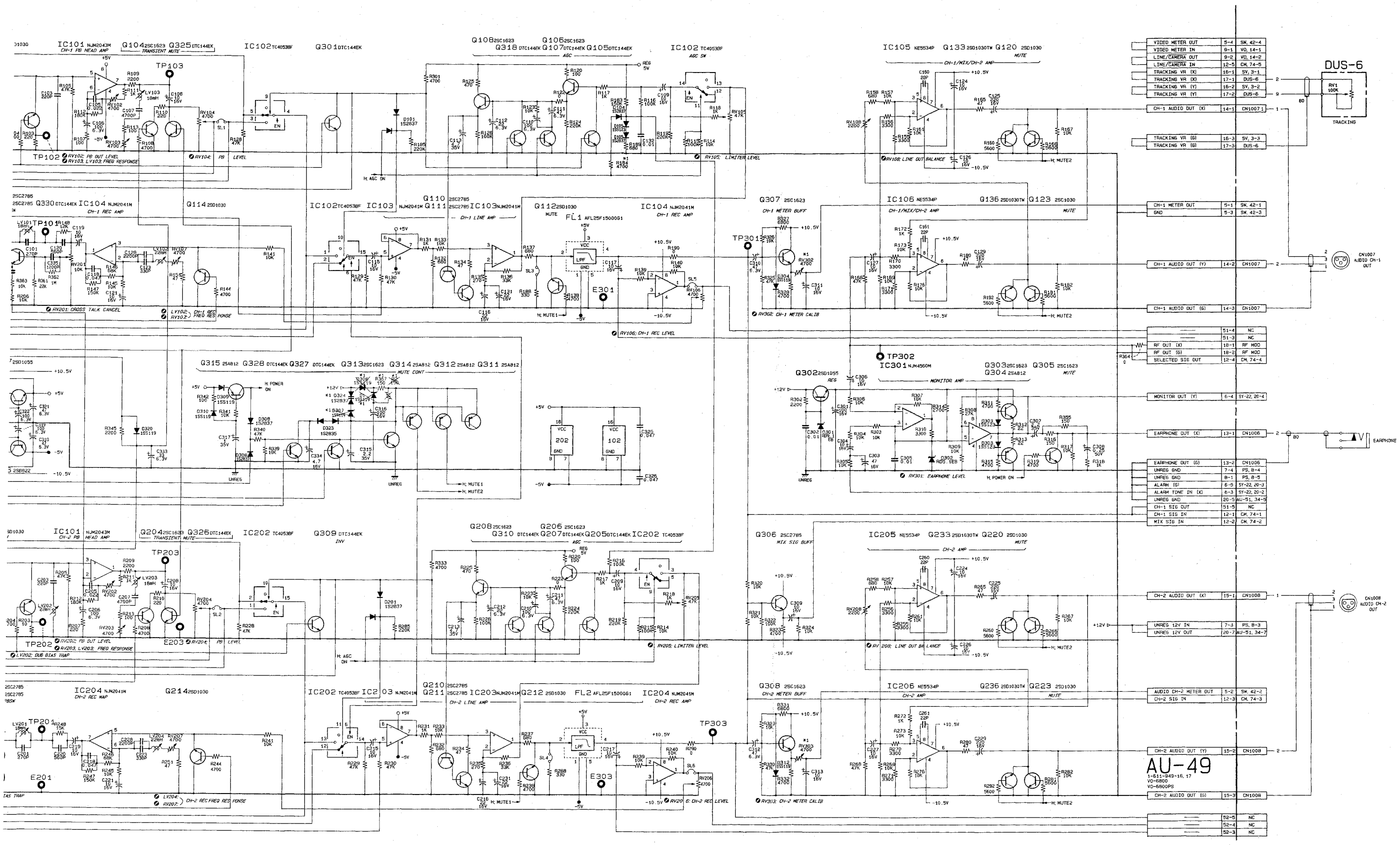
AU-49 (AUDIO REC/PB AMP)
DUS-6 (TRACKING VR)

S/N 13481 AND LATER (UC)
S/N 10661 AND LATER (J)

NOTE;

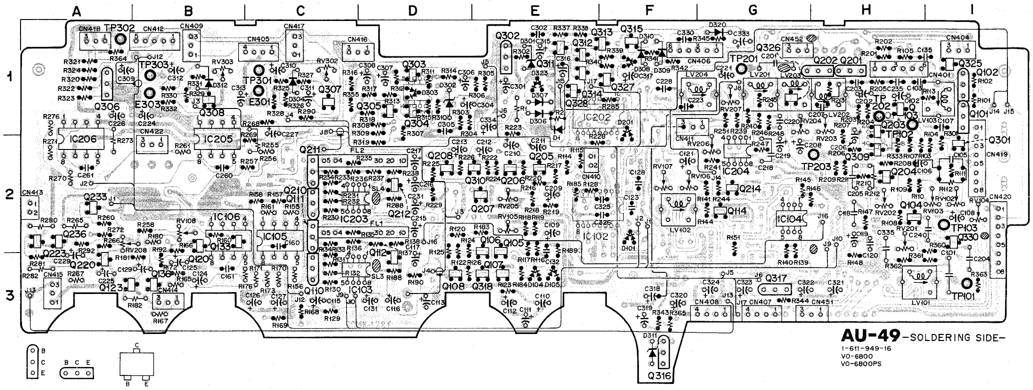
MARK	CHANGE INFORMATION	SERIAL NO.
*1	D1 D306) 1SS119 D307) DELETED R2 150 DELETED R184 8200 → 4700 RV302) 5K → 4700 RV303) R367 150 ADDED D324 1S2837 ADDED	UC; 15331 AND LATER J ; 11211 AND LATER


DU-58
KY-53
RV1 CH-1 REC LEVEL
RV2 CH-2 REC LEVEL
CM, 70-5 | 10-1 | CH-1 MIC AMP IN (X)
SW, 41-1 | 4-1 | AGC ON/OFF IN (X)
SW, 41-2 | 4-2 | +5V OUT
H1002 | 1-4 | CH-1 AUDIO HEAD (X)
H1002 | 1-5 | CH-1 AUDIO HEAD (Y)
H1002 | 1-6 | CH-1 AUDIO HEAD (G)
H; AGC ON
REG 5V
AU-51, 33-2 | 19-2 | CH-1 REC BIAS IN
AU-51, 33-4 | 19-4 | H; CH-1 EE IN
NC | 51-1
NC | 52-2
AU-51, 33-3 | 19-3 | AUDIO CH-1 PB/EE IN
KY, 5-3 | 2-6 | CH-1 AUDIO LEVEL VR (G)
AU-51, 33-1 | 19-1 | H; CH-1 PB IN
KY, 5-3 | 2-1 | AUDIO LEVEL VR (G)
AU-51, 34-3 | 20-3 | CH-1 PB/REC IN
KY, 5-1 | 2-8 | CH-1 AUDIO LEVEL VR (X)
KY, 5-2 | 2-7 | CH-1 AUDIO LEVEL VR (Y)
NC | 9-3
SY-22, 20-6 | 6-6 | H; PINCH ON OFF IN
SY-22, 20-5 | 6-2 | H; FF/REW IN
PS, 8-8 | 8-4 | REG 10.5V IN
CM, 73-1 | 11-1 | REG 5V OUT
PS, 8-2 | 7-2 | REG 5V IN
AU-51, 34-6 | 20-6 | REG 5V OUT
PS, 8-1 | 7-1 | REG GND
CM, 70-2 | 8-2 | REG GND
NC | 50-2
AU-51, 34-8 | 20-8 | GND
PS, 8-6 | 11-2 | GND
PS, 8-7 | 8-3 | REG -10.5V IN
NC | 50-3
CM, 70-3 | 11-3 | REG -5V OUT
SY-22, 20-1 | 6-1 | H; AUDIO MUTE IN
NC | 20-2
AU-51, 34-2 | 20-2 | H; DUB IN
PS, 18-3 | 8-1 | H; POWER SAVE IN
CM, 70-4 | 10-1 | CH-2 MIC AMP IN (X)
H1002 | 1-1 | CH-2 AUDIO HEAD (X)
H1002 | 1-2 | CH-2 AUDIO HEAD (Y)
H1002 | 1-3 | CH-2 AUDIO HEAD (G)
AU-51, 33-6 | 19-6 | CH-2 REC BIAS IN
AU-51, 33-8 | 19-8 | H; CH-2 EE IN
NC | 52-1
NC | 52-2
AU-51, 33-5 | 19-5 | AUDIO CH-2 PB/EE IN
*MARKS ARE NOT MOUNTED
AU-51, 33-7 | 19-7 | CH-2 PB/REC IN
KY, 5-6 | 3-1 | AUDIO LEVEL VR (G)
AU-51, 34-1 | 20-1 | CH-2 PB/REC IN
KY, 5-4 | 3-7 | CH-2 AUDIO LEVEL VR (X)
KY, 5-5 | 3-6 | CH-2 AUDIO LEVEL VR (Y)
KY, 5-6 | 3-5 | CH-2 AUDIO LEVEL VR (G)
Q103 2SD1030 REC SW
IC101 NJM2043M CH-1 PB HEAD AMP
Q104 2SC1623
TRANSIENT MUTE
TP103
E102
TP102
RV102; PB OUT LEVEL
RV103, LV103; FREQ RESPONSE
Q101 2SC2785
Q102 2SC2785 PBSW
Q330 DTC144EK
IC104 NJM2041M CH-1 REC AMP
TP101
LV101; BIAS TRAP
RV201; CROSS TALK CANCEL
Q317 2SD1055
+10.5V
REG 5V
+5V
-5V
Q316 2SB822
-10.5V
D320 1SS119
Q203 2SD1030 REC SW
IC101 NJM2043M CH-2 PB HEAD AMP
Q204 2SC1623
TRANSIENT MUTE
TP203
TP202
RV202; PB OUT LEVEL
RV203, LV203; FREQ RESPONSE
LV202; DUB BIAS TRAP
E203
Q201 2SC2785
Q202 2SC2785 PBSW
IC204 NJM2041M CH-2 REC AMP
Q214
TP201
E201
LV201; BIAS TRAP


IC101 NJM2043M CH-1 PB HEAD AMP
Q104 2SC1623 Q325 DTC144EK TRANSIENT MUTE
TP103
TP102
RV102: PB OUT LEVEL
RV103, LV103: FREQ RESPONSE
IC102 TC4053BF
Q301 DTC144EK
RV104: PB LEVEL
SL1
D101 1S2837
H: ASC ON
Q108 2SC1623 Q106 2SC1623
Q318 DTC144EK Q107 DTC144EK Q105 DTC144EK
AGC
REG 5V
IC102 TC4053BF AGC SW
RV105: LIMITER LEVEL
IC105 NE5534P Q133 2SD1030TW Q120 2SD1030
CH-1/MIX/CH-2 AMP
MUTE
RV108: LINE OUT BALANCE
H: MUTE2
Q330 DTC144EK IC104 NJM2041M CH-1 REC AMP
Q114 2SD1030
TP101
RV201: CROSS TALK CANCEL
LV102/RV107: CH-1 REC FREQ RESPONSE
IC102 TC4053BF IC103 NJM2041M Q111
Q110 2SC2785
IC103 NJM2041M CH-1 LINE AMP
Q112 2SD1030 MUTE
FL1 AFL25F1500GG1
LPF
VCC
GND
IC104 NJM2041M CH-1 REC AMP
SL3
SL5
E301
H: MUTE1
RV106: CH-1 REC LEVEL
TP301
Q307 2SC1623 CH-1 METER BUFF
RV302: CH-1 METER CALIB
IC106 NE5534P Q136 2SD1030TW Q123 2SC1030
CH-1/MIX/CH-2 AMP
MUTE
Q315 2SA812 Q328 DTC144EK Q327 DTC144EK Q313 2SC1623 Q314 2SA812 Q312 2SA812 Q311 2SA812
MUTE CONT
H: POWER ON
UNREG
H: MUTE1
H: MUTE2
202
102
TP302
Q302 2SD1055 REG
IC301 NJM4560M MONITOR AMP
Q303 2SC1623 Q305 2SC1623
Q304 2SA812 MUTE
RV301: EARPHONE LEVEL
H: POWER ON
EARPHONE
IC101 NJM2043M CH-2 PB HEAD AMP
Q204 2SC1623 Q326 DTC144EK TRANSIENT MUTE
IC202 TC4053BF
Q309 DTC144EK INV
TP203
TP202
E203
RV202: PB OUT LEVEL
RV203, LV203: FREQ RESPONSE
LV202: DUB BIAS TRAP
RV204: PB LEVEL
SL2
D201 1S2837
H: AGC ON
Q208 2SC1623 Q206 2SC1623
Q310 DTC144EK Q207 DTC144EK Q205 DTC144EK IC202 TC4053BF
AGC
RV205: LIMITER LEVEL
Q306 2SC2785 MIX SIG BUFF
IC205 NE5534P Q233 2SD1030TW Q220 2SD1030
CH-2 AMP
MUTE
RV208: LINE OUT BALANCE
IC204 NJM2041M CH-2 REC AMP
Q214 2SD1030
TP204
E201
LV204/RV207: CH-2 REC FREQ RESPONSE
IC202 TC4053BF IC203 NJM2041M
Q210 2SC2785 Q211 2SC2785 IC203 NJM2041M Q212 2SD1030
CH-2 LINE AMP
FL2 AFL25F1500GG1
IC204 NJM2041M CH-2 REC AMP
SL4
SL6
E303
TP303
RV206: CH-2 REC LEVEL
Q308 2SC1623 CH-2 METER BUFF
RV303: CH-2 METER CALIB
IC206 NE5534P Q236 2SD1030TW Q223 2SC1030
CH-2 AMP
MUTE
VIDEO METER OUT 5-4 SW, 42-4
VIDEO METER IN 9-1 VO, 14-1
LINE/CAMERA OUT 9-2 VO, 14-2
LINE/CAMERA IN 12-5 CM, 74-5
TRACKING VR (X) 16-1 SV, 3-1
TRACKING VR (X) 17-1 DUS-6
TRACKING VR (Y) 16-2 SV, 3-2
TRACKING VR (Y) 17-2 DUS-6
CH-1 AUDIO OUT (X) 14-1 CN1007 1
TRACKING VR (G) 16-3 SV, 3-3
TRACKING VR (G) 17-3 DUS-6
DUS-6
RV1 100K
TRACKING
CH-1 METER OUT 5-1 SW, 42-1
GND 5-3 SW, 42-3
CH-1 AUDIO OUT (Y) 14-2 CN1007
CN1007 AUDIO CH-1 OUT
CH-1 AUDIO OUT (G) 14-3 CN1007
51-4 NC
51-3 NC
RF OUT (X) 18-1 RF MOD
RF OUT (G) 18-2 RF MOD
SELECTED SIG OUT 12-4 CM, 74-4
R364 0
MONITOR OUT (Y) 6-4 SY-22, 20-4
EARPHONE OUT (X) 13-1 CN1006
EARPHONE OUT (G) 13-2 CN1006
UNREG GND 7-4 PS, 8-4
UNREG GND 8-1 PS, 8-5
ALARM (G) 6-5 SY-22, 20-3
ALARM TONE IN (X) 6-3 SY-22, 20-2
UNREG GND 20-5 AU-51, 34-5
CH-1 SIG OUT 51-5 NC
CH-1 SIG IN 12-1 CM, 74-1
MIX SIG IN 12-2 CM, 74-2
CH-2 AUDIO OUT (X) 15-1 CN1008
CN1008 AUDIO CH-2 OUT
UNREG 12V IN 7-3 PS, 8-3
UNREG 12V OUT 20-7 AU-51, 34-7
AUDIO CH-2 METER OUT 5-2 SW, 42-2
CH-2 SIG IN 12-3 CM, 74-3
CH-2 AUDIO OUT (Y) 15-2 CN1008
AU-49
1-611-949-16, 17
VO-6800
VO-6800PS
CH-2 AUDIO OUT (G) 15-3 CN1008
52-5 NC
52-4 NC
52-3 NC

AU-49 (AUDIO REC/PB AMP)

S/N 13481 TO 15330 (UC)
S/N 10661 TO 11210 (J)

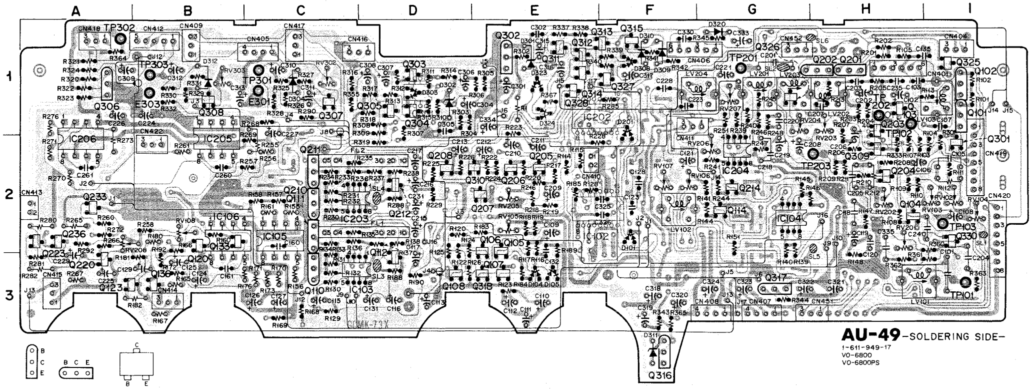

A
B
C
D
E
F
G
H
I
1
2
3
IC206
IC205
IC106
IC105
IC203
IC103
IC202
IC102
IC204
IC104
TP302
TP303
TP301
TP201
TP202
TP203
TP102
TP103
TP101
E301
E303
Q316
D311
B
C
E
B C E
C
B E

AU-49-SOLDERING SIDE-
1-611-949-16
VO-6800
VO-6800PS

CN401	H - 1
CN404	I - 1
CN405	C - 1
CN406	G - 1
CN407	G - 3
CN408	G - 3
CN409	B - 1
CN410	E - 2
CN411	F - 1
CN412	B - 1
CN413	A - 2
CN414	B - 3
CN415	A - 3
CN416	D - 1
CN417	C - 1
CN418	A - 1
CN419	I - 2
CN420	I - 2
CN422	B - 2
CN451	H - 3
CN452	G - 1
D1	E - 1
D101	F - 2
D104	E - 3
D105	E - 3
D201	F - 1
D301	E - 1
D302	D - 1
D303	D - 1
D304	C - 1
D306	E - 1
D307	E - 1
D308	F - 1
D309	F - 1
D310	F - 1
D311	F - 3
D312	B - 1
D320	G - 1
D323	E - 1
E301	C - 1
E303	B - 1
FL1	D - 2
FL2	D - 2
IC101	H - 1
IC102	E - 2
IC103	C - 3
IC104	G - 2
IC105	C - 2
IC106	B - 2
IC202	E - 1
IC203	C - 2
IC204	G - 2
IC205	B - 2
IC206	A - 2
IC301	D - 1
LV101	H - 3
LV102	F - 2
LV103	I - 1
LV201	G - 1
LV202	H - 1
LV203	G - 1
LV204	G - 1
Q101	I - 1
Q102	I - 1
Q103	H - 1
Q104	H - 2
Q105	E - 3
Q106	E - 3
Q107	E - 3
Q108	D - 3
Q110	C - 3
Q111	C - 2
Q112	D - 3
Q114	G - 2
Q120	B - 2
Q123	A - 3
Q133	B - 2
Q136	B - 3
Q201	H - 1
Q202	H - 1
Q203	H - 1
Q204	H - 2
Q205	E - 2
Q206	E - 2
Q207	E - 2
Q208	D - 2
Q210	C - 2
Q211	C - 2
Q212	D - 2
Q214	G - 2
Q220	A - 3
Q223	A - 2
Q233	A - 2
Q236	A - 2
Q301	I - 2
Q302	E - 1
Q303	D - 1
Q304	D - 1
Q305	D - 1
Q306	A - 1
Q307	C - 1
Q308	B - 1
Q309	H - 2
Q310	E - 2
Q311	E - 1
Q312	E - 1
Q313	F - 1
Q314	E - 1
Q315	F - 1
Q316	F - 3
Q317	G - 3
Q318	E - 3
Q325	I - 1
Q326	G - 1
Q327	F - 1
Q328	E - 1
Q330	I - 2
RV102	I - 2
RV103	I - 2
RV104	I - 2
RV105	E - 2
RV106	F - 2
RV107	F - 2
RV108	B - 2
RV201	H - 2
RV202	H - 2
RV203	H - 1
RV204	G - 1
RV205	E - 2
RV206	G - 2
RV207	G - 1
RV208	A - 2
RV302	C - 1
RV303	B - 1
TP101	I - 3
TP102	H - 1
TP103	I - 2
TP201	G - 1
TP202	H - 1
TP203	H - 2
TP301	C - 1
TP302	A - 1
TP303	B - 1

AU-49 (AUDIO REC/PB AMP)

S/N 15331 AND LATER (UC)
S/N 11211 AND LATER (J)



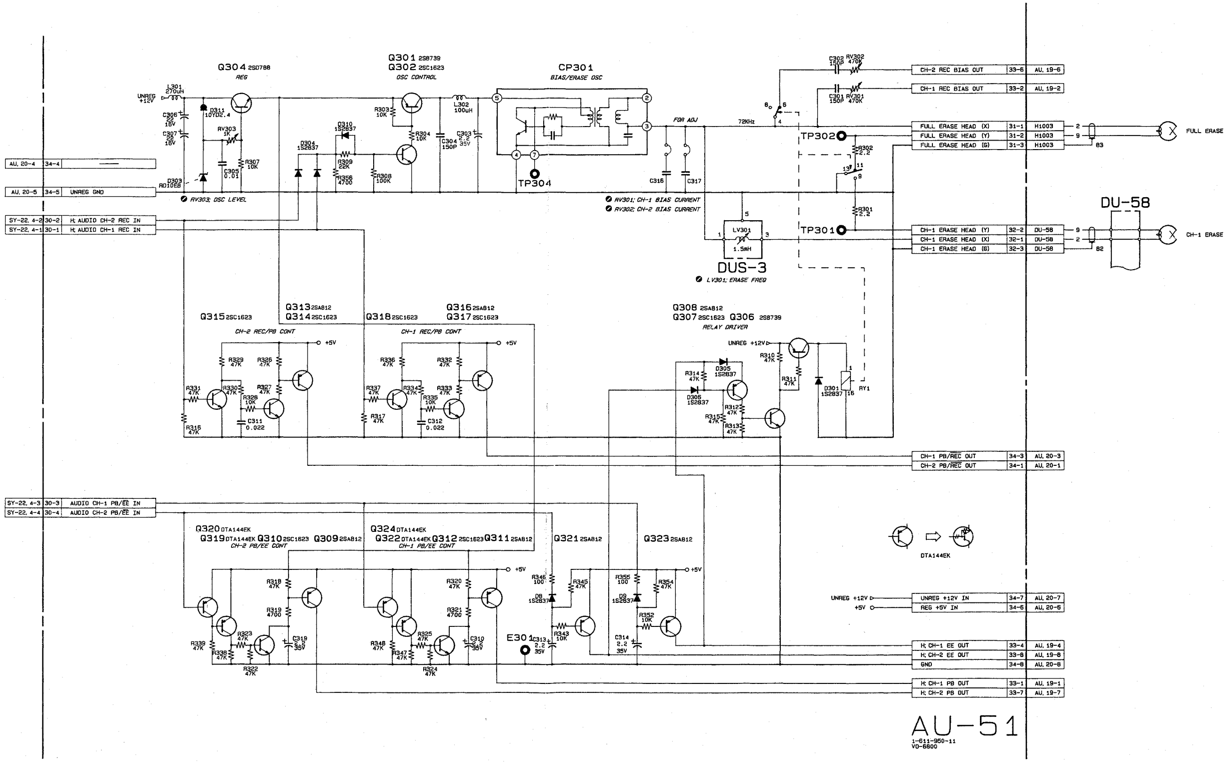
CN401	H - 1
CN404	I - 1
CN405	C - 1
CN406	G - 1
CN407	G - 3
CN408	G - 3
CN409	B - 1
CN410	E - 2
CN411	F - 1
CN412	B - 1
CN413	A - 2
CN414	B - 3
CN415	A - 3
CN416	D - 1
CN417	C - 1
CN418	A - 1
CN419	I - 2
CN420	I - 2
CN422	B - 2
CN451	H - 3
CN452	G - 1
D101	F - 2
D104	E - 3
D105	E - 3
D201	F - 1
D301	E - 1
D302	D - 1
D303	D - 1
D304	C - 1
D308	F - 1
D309	F - 1
D310	F - 1
D311	F - 3
D312	B - 1
D320	G - 1
D323	E - 1
D324	E - 1
E301	C - 1
E303	B - 1
FL1	D - 2
FL2	D - 2
IC101	H - 1
IC102	E - 2
IC103	C - 3
IC104	G - 2
IC105	C - 2
IC106	B - 2
IC202	E - 1
IC203	C - 2
IC204	G - 2
IC205	B - 2
IC206	A - 2
IC301	D - 1
LV101	H - 3
LV102	F - 2
LV103	I - 1
LV201	G - 1
LV202	H - 1
LV203	G - 1
LV204	G - 1
Q101	I - 1
Q102	I - 1
Q103	H - 1
Q104	H - 2
Q105	E - 3
Q106	E - 3
Q107	E - 3
Q108	D - 3
Q110	C - 3
Q111	C - 2
Q112	D - 3
Q114	G - 2
Q120	B - 2
Q123	A - 3
Q133	B - 2
Q136	B - 3
Q201	H - 1
Q202	H - 1
Q203	H - 1
Q204	H - 2
Q205	E - 2
Q206	E - 2
Q207	E - 2
Q208	D - 2
Q210	C - 2
Q211	C - 2
Q212	D - 2
Q214	G - 2
Q220	A - 3
Q223	A - 2
Q233	A - 2
Q236	A - 2
Q301	I - 2
Q302	E - 1
Q303	D - 1
Q304	D - 1
Q305	D - 1
Q306	A - 1
Q307	C - 1
Q308	B - 1
Q309	H - 2
Q310	E - 2
Q311	E - 1
Q312	E - 1
Q313	F - 1
Q314	E - 1
Q315	F - 1
Q316	F - 3
Q317	G - 3
Q318	E - 3
Q325	I - 1
Q326	G - 1
Q327	F - 1
Q328	E - 1
Q330	I - 2
RV102	I - 2
RV103	I - 2
RV104	I - 2
RV105	E - 2
RV106	F - 2
RV107	F - 2
RV108	B - 2
RV201	H - 2
RV202	H - 2
RV203	H - 1
RV204	G - 1
RV205	E - 2
RV206	G - 2
RV207	G - 1
RV208	A - 2
RV302	C - 1
RV303	B - 1
TP101	I - 3
TP102	H - 1
TP103	I - 2
TP201	G - 1
TP202	H - 1
TP203	H - 2
TP301	C - 1
TP302	A - 1
TP303	B - 1

AU-51 (BI
DUS-3

S/N 100
S/N 100

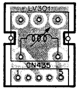
AU-51 (BIAS/ERASE OSC, REC/PB CONTROL)
DUS-3

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)

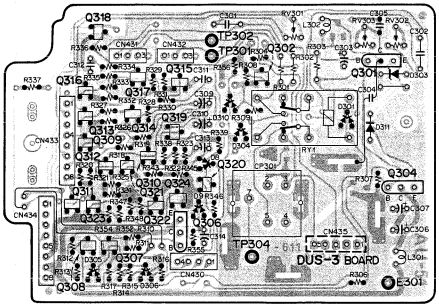

Q304 2SD788
REG
Q301 2SB739
Q302 2SC1623
OSC CONTROL
CP301
BIAS/ERASE OSC
L301 270uH
UNREG +12V
C306 22 16V
C307 22 16V
D311 10YD2.4
RV303 1K
C305 0.01
R307 10K
D303 RD10EB
D304 1S2837
D310 1S2837
R309 22K
R356 4700
R303 10K
R304 10K
R308 100K
L302 100uH
C304 150P
C303 2.2 35V
TP304
FOR ADJ
72KHz
C316
C317
RV301; CH-1 BIAS CURRENT
RV302; CH-2 BIAS CURRENT
RV303; OSC LEVEL
C302 150P
RV302 470K
C301 150P
RV301 470K
TP302
TP301
R302 2.2
R301 2.2
LV301
1.5mH
DUS-3
LV301; ERASE FREQ
CH-2 REC BIAS OUT | 33-6 | AU, 19-6
CH-1 REC BIAS OUT | 33-2 | AU, 19-2
FULL ERASE HEAD (X) | 31-1 | H1003
FULL ERASE HEAD (Y) | 31-2 | H1003
FULL ERASE HEAD (G) | 31-3 | H1003
FULL ERASE
83
DU-58
CH-1 ERASE HEAD (Y) | 32-2 | DU-58
CH-1 ERASE HEAD (X) | 32-1 | DU-58
CH-1 ERASE HEAD (G) | 32-3 | DU-58
CH-1 ERASE
82
AU, 20-4 | 34-4
AU, 20-5 | 34-5 | UNREG GND
SY-22, 4-2 | 30-2 | H; AUDIO CH-2 REC IN
SY-22, 4-1 | 30-1 | H; AUDIO CH-1 REC IN
Q315 2SC1623
Q313 2SA812
Q314 2SC1623
CH-2 REC/PB CONT
Q318 2SC1623
Q316 2SA812
Q317 2SC1623
CH-1 REC/PB CONT
+5V
R329 47K
R326 47K
R331 47K
R330 47K
R328 10K
R327 47K
C311 0.022
R316 47K
R336 47K
R332 47K
R337 47K
R334 47K
R335 10K
R333 47K
R317 47K
C312 0.022
Q308 2SA812
Q307 2SC1623
Q306 2SB739
RELAY DRIVER
UNREG +12V
R310 47K
R314 47K
D305 1S2837
D306 1S2837
R311 47K
D301 1S2837
RY1
R312 47K
R315 47K
R313 47K
CH-1 PB/REC OUT | 34-3 | AU, 20-3
CH-2 PB/REC OUT | 34-1 | AU, 20-1
SY-22, 4-3 | 30-3 | AUDIO CH-1 PB/EE IN
SY-22, 4-4 | 30-4 | AUDIO CH-2 PB/EE IN
Q320 DTA144EK
Q319 DTA144EK
Q310 2SC1623
Q309 2SA812
CH-2 PB/EE CONT
Q324 DTA144EK
Q322 DTA144EK
Q312 2SC1623
Q311 2SA812
CH-1 PB/EE CONT
Q321 2SA812
Q323 2SA812
R318 47K
R319 4700
R323 47K
R339 47K
R338 47K
R322 47K
C319 2.2 35V
R320 47K
R321 4700
R325 47K
R348 47K
R347 47K
R324 47K
C310 2.2 35V
R346 100
D8 1S2837
R345 47K
R343 10K
E301
C313 2.2 35V
R355 100
D9 1S2837
R354 47K
R352 10K
C314 2.2 35V
DTA144EK
UNREG +12V
+5V
UNREG +12V IN | 34-7 | AU, 20-7
REG +5V IN | 34-6 | AU, 20-6
H; CH-1 EE OUT | 33-4 | AU, 19-4
H; CH-2 EE OUT | 33-8 | AU, 19-8
GND | 34-8 | AU, 20-8
H; CH-1 PB OUT | 33-1 | AU, 19-1
H; CH-2 PB OUT | 33-7 | AU, 19-7
AU-51
1-611-950-11
VO-6800

AU-51 (BIAS/ERASE OSC, REC/PB CONTROL)
DUS-3

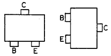
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


LV301
CN435
1
5

DUS-3
-SOLDERING SIDE-
1-611-961-11
VO-6800

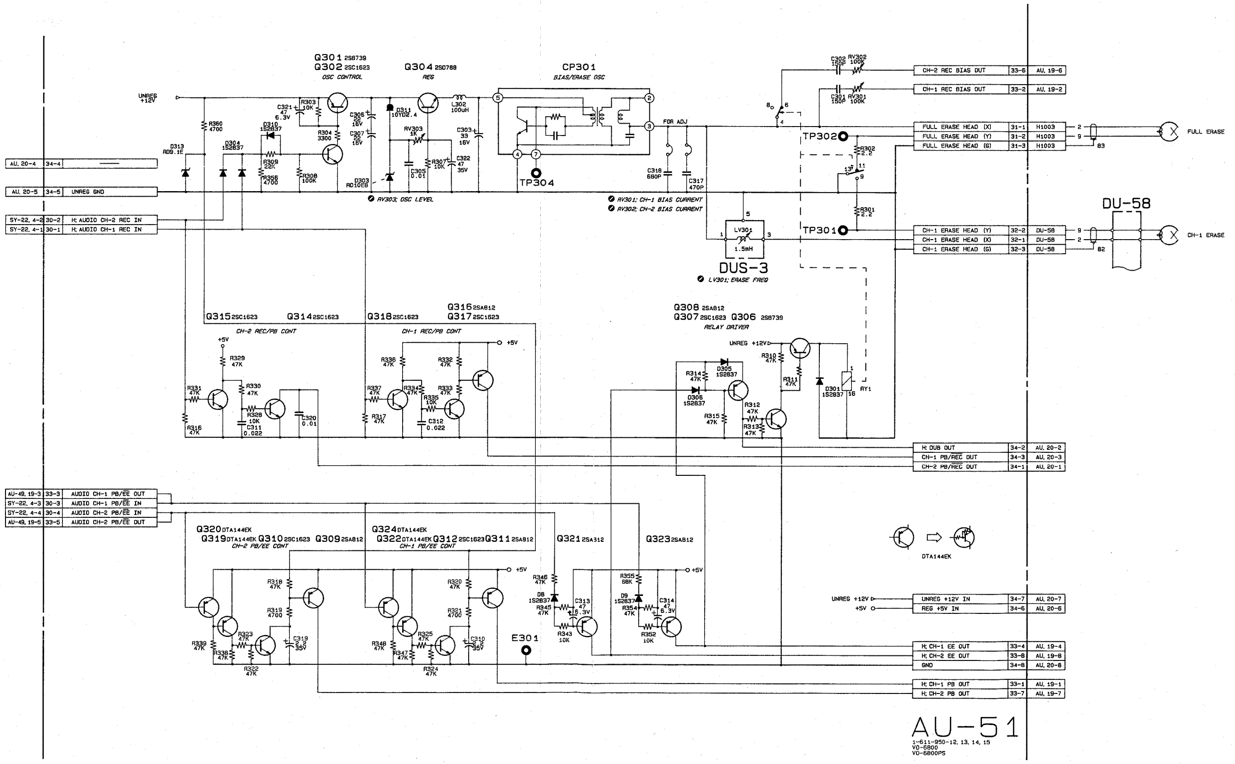

Q318
C301
RV301
L302
C305
RV303
RV302
C302
TP302
TP301
CN431
CN432
R336
R304
Q302
R303
C303
R302
Q301
D303
C312
R334
R329
Q315
C311
R356
R308
R337
Q316
R335
R333
Q317
R331
C309
R301
C304
R327
R332
R328
R330
Q319
C310
D310
R309
D301
CN433
Q313
R326
Q314
R339
D311
Q309
C313
D304
RY1
Q312
R318
R319
R338
R323
R320
R343
R322
R345
Q320
CP301
Q304
R321
R325
Q310
Q324
R307
Q311
R324
Q321
D9
R346
CN434
R347
Q323
R348
Q322
Q306
C307
R354
R352
R310
C306
CN435
R311
C314
TP304
R312
D305
Q307
R316
R355
DUS-3 BOARD
L301
R313
CN430
R306
Q308
R317
R315
D306
E301
R314
B
C
E

AU-51 -SOLDERING SIDE-
1-611-950-11
VO-6800



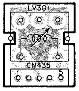
AU-51 (BIAS/ERASE OSC, REC/PB CONTROL)
DUS-3

S/N 10031 TO 13480 (UC)
S/N 10011 TO 10660 (J)

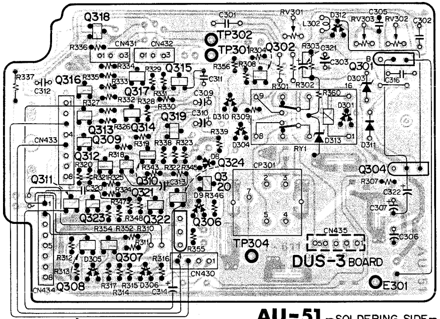

Q301 2SB739
Q302 2SC1623
OSC CONTROL
Q304 2SD768
REG
CP301
BIAS/ERASE OSC
UNREG +12V
R360 4700
D313 RD9.1E
D304 1S2837
D310 1S2837
R309 22K
R356 4700
R303 10K
C321 47 6.3V
R304 3300
R308 100K
C306 22 16V
C307 22 16V
D311 10YD2.4
D303 RD10EB
RV303 1K
C305 0.01
R307 10K
C322 47 35V
L302 100uH
C303 33 16V
TP304
FOR ADJ
C318 680P
C317 470P
RV303; OSC LEVEL
RV301; CH-1 BIAS CURRENT
RV302; CH-2 BIAS CURRENT
C302 150P RV302 100K
C301 150P RV301 100K
TP302
R302 2.2
TP301
R301 2.2
LV301 1.5mH
DUS-3
LV301; ERASE FREQ
DU-58
AU, 20-4 | 34-4
AU, 20-5 | 34-5 | UNREG GND
SY-22, 4-2 | 30-2 | H; AUDIO CH-2 REC IN
SY-22, 4-1 | 30-1 | H; AUDIO CH-1 REC IN
CH-2 REC BIAS OUT | 33-6 | AU, 19-6
CH-1 REC BIAS OUT | 33-2 | AU, 19-2
FULL ERASE HEAD (X) | 31-1 | H1003
FULL ERASE HEAD (Y) | 31-2 | H1003
FULL ERASE HEAD (G) | 31-3 | H1003
83
FULL ERASE
CH-1 ERASE HEAD (Y) | 32-2 | DU-58
CH-1 ERASE HEAD (X) | 32-1 | DU-58
CH-1 ERASE HEAD (G) | 32-3 | DU-58
82
CH-1 ERASE
Q315 2SC1623 Q314 2SC1623
CH-2 REC/PB CONT
Q318 2SC1623
Q316 2SA812
Q317 2SC1623
CH-1 REC/PB CONT
+5V
R329 47K
R330 47K
R331 47K
R328 10K
C311 0.022
C320 0.01
R316 47K
R336 47K
R332 47K
R337 47K
R334 47K
R335 10K
R333 47K
R317 47K
C312 0.022
Q308 2SA812
Q307 2SC1623 Q306 2SB739
RELAY DRIVER
UNREG +12V
R310 47K
R314 47K
D305 1S2837
D306 1S2837
R311 47K
D301 1S2837
RY1
R312 47K
R315 47K
R313 47K
H; DUB OUT | 34-2 | AU, 20-2
CH-1 PB/REC OUT | 34-3 | AU, 20-3
CH-2 PB/REC OUT | 34-1 | AU, 20-1
AU-49, 19-3 | 33-3 | AUDIO CH-1 PB/EE OUT
SY-22, 4-3 | 30-3 | AUDIO CH-1 PB/EE IN
SY-22, 4-4 | 30-4 | AUDIO CH-2 PB/EE IN
AU-49, 19-5 | 33-5 | AUDIO CH-2 PB/EE OUT
Q320 DTA144EK
Q319 DTA144EK Q310 2SC1623 Q309 2SA812
CH-2 PB/EE CONT
Q324 DTA144EK
Q322 DTA144EK Q312 2SC1623 Q311 2SA812
CH-1 PB/EE CONT
Q321 2SA312
Q323 2SA812
R318 47K
R319 4700
R323 47K
C319 3.3 35V
R339 47K
R338 47K
R322 47K
R320 47K
R321 4700
R325 47K
C310 3.3 35V
R348 47K
R347 47K
R324 47K
R346 47K
D8 1S2837
R345 47K
C313 47 6.3V
R343 10K
E301
R355 68K
D9 1S2837
R354 47K
C314 47 6.3V
R352 10K
DTA144EK
UNREG +12V
+5V
UNREG +12V IN | 34-7 | AU, 20-7
REG +5V IN | 34-6 | AU, 20-6
H; CH-1 EE OUT | 33-4 | AU, 19-4
H; CH-2 EE OUT | 33-8 | AU, 19-8
GND | 34-8 | AU, 20-8
H; CH-1 PB OUT | 33-1 | AU, 19-1
H; CH-2 PB OUT | 33-7 | AU, 19-7
AU-51
1-611-950-12, 13, 14, 15
VO-6800
VO-6800PS

AU-51 (BIAS/ERASE OSC, REC/PB CONTROL)
DUS-3

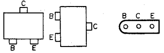
S/N 10031 TO 10630 (UC)
S/N 10011 TO 10260 (J)


LV301
CN435

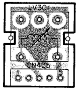
DUS-3
-SOLDERING SIDE-
1-611-961-11
VO-6800


Q318
C301
RV301
D312
C305
RV303
RV302
C302
L302
TP302
TP301
Q302
R336
CN431
CN432
R337
C312
Q316
R334
R329
Q315
R356
R308
R303
C321
C303
Q301
Q317
R331
C311
R301
R302
R360
D303
C316
Q313
Q314
Q319
C309
C310
D310
R309
D301
R339
Q309
R338
R323
D304
D313
D311
CN433
Q312
RY1
Q324
D8
CP301
Q304
Q311
Q310
Q321
Q3
20
R307
D9
R346
C322
C307
Q323
Q322
R354
R352
R310
Q306
C306
CN435
TP304
R355
Q307
R316
R312
D305
R313
Q308
R317
R315
D306
R314
C314
CN430
CN434
DUS-3 BOARD
E301

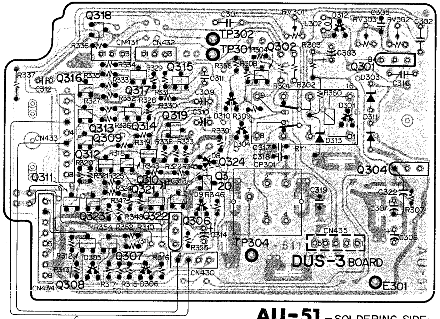
AU-51 -SOLDERING SIDE-
1-611-950-12
VO-6800
VO-6800PS



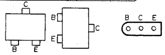
S/N 10631 TO 13480 (UC)
S/N 10261 TO 10660 (J)


LV301
CN435

DUS-3
-SOLDERING SIDE-
1-611-961-11
VO-6800
VO-6800PS

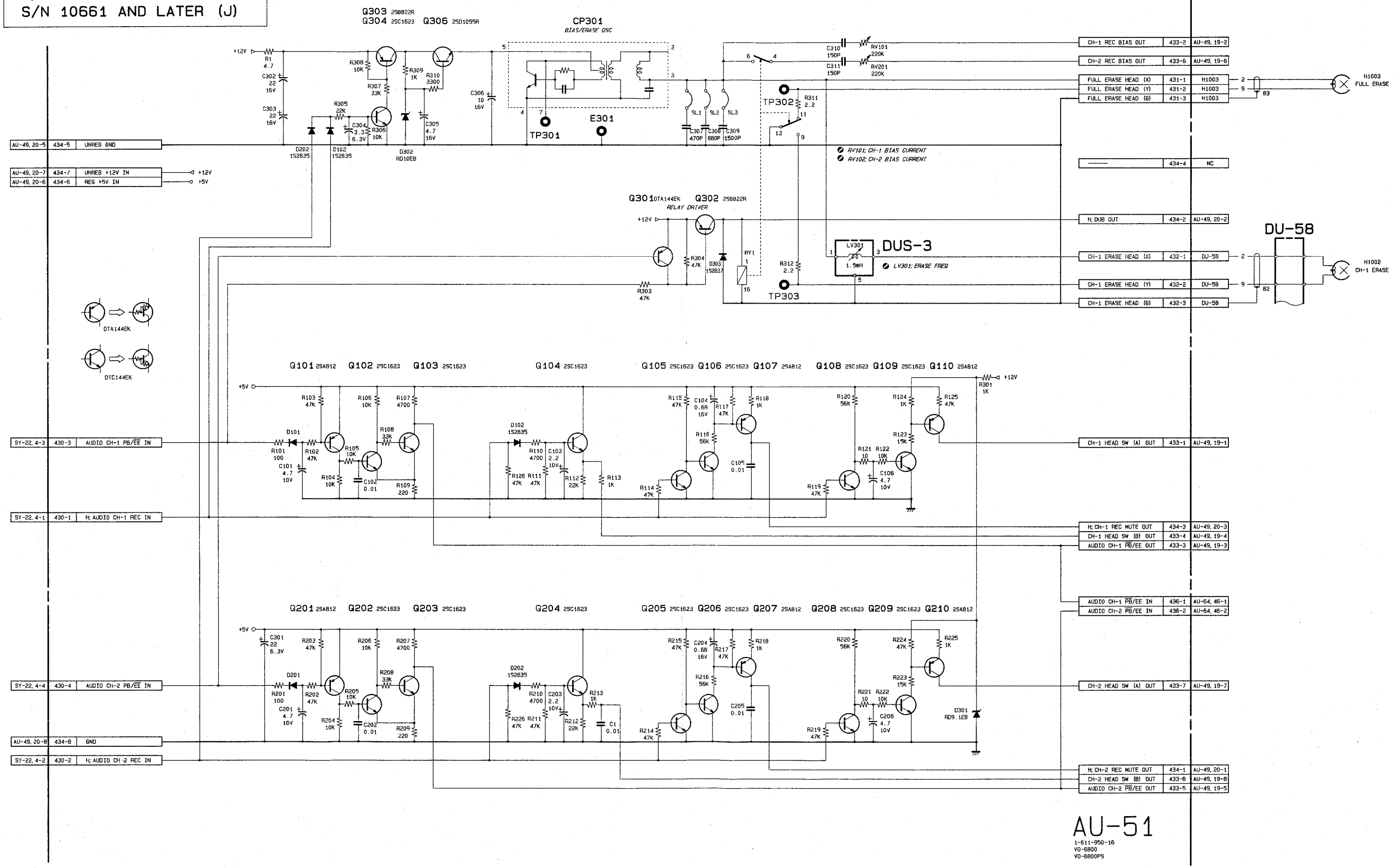

Q318
C301
RV301
D312
C305
RV303
RV302
C302
L302
TP302
TP301
Q302
C303
Q301
Q315
Q316
Q317
Q313
Q314
Q319
Q309
Q312
CN433
Q324
C317
C318
RY1
D313
D311
CP301
Q304
Q311
Q310
Q321
Q3
20
C319
C322
C307
R307
Q323
Q322
Q306
C314
C306
CN435
TP304
R355
Q307
CN430
Q308
CN434
DUS-3 BOARD
E301
AU-51

AU-51 -SOLDERING SIDE-
1-611-950-15
VO-6800
VO-6800PS



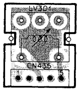
AU-51 (BIAS/ERASE OSC, REC/PB CONTROL)
DUS-3

S/N 13481 AND LATER (UC)
S/N 10661 AND LATER (J)

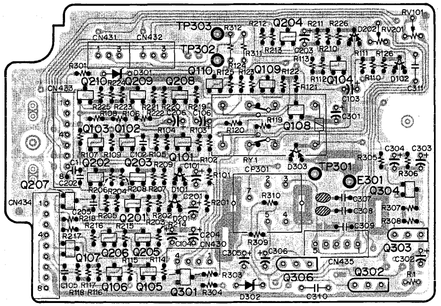

Q303 2SB822R
Q304 2SC1623
Q306 2SD1055R
CP301
BIAS/ERASE OSC
+12V
R1 4.7
C302 22 16V
C303 22 16V
R308 10K
R307 33K
R309 1K
R310 3300
R305 22K
C304 3.3 6.3V
R306 10K
C305 4.7 16V
C306 10 16V
D202 1S2835
D102 1S2835
D302 RD10EB
TP301
E301
SL1
SL2
SL3
C307 470P
C308 680P
C309 1500P
C310 150P
C311 150P
RV101 220K
RV201 220K
TP302
R311 2.2
RV101; CH-1 BIAS CURRENT
RV102; CH-2 BIAS CURRENT
AU-49, 20-5 | 434-5 | UNREG GND
AU-49, 20-7 | 434-7 | UNREG +12V IN
AU-49, 20-6 | 434-6 | REG +5V IN
+12V
+5V
Q301 DTA144EK
Q302 2SB822R
RELAY DRIVER
R304 47K
D303 1S2837
RY1
R303 47K
R312 2.2
TP303
LV301 1.5mH
DUS-3
LV301; ERASE FREQ
DU-58
DTA144EK
DTC144EK
CH-1 REC BIAS OUT | 433-2 | AU-49, 19-2
CH-2 REC BIAS OUT | 433-6 | AU-49, 19-6
FULL ERASE HEAD (X) | 431-1 | H1003
FULL ERASE HEAD (Y) | 431-2 | H1003
FULL ERASE HEAD (G) | 431-3 | H1003
H1003 FULL ERASE
83
434-4 | NC
H; DUB OUT | 434-2 | AU-49, 20-2
CH-1 ERASE HEAD (X) | 432-1 | DU-58
CH-1 ERASE HEAD (Y) | 432-2 | DU-58
CH-1 ERASE HEAD (G) | 432-3 | DU-58
82
H1002 CH-1 ERASE
Q101 2SA812
Q102 2SC1623
Q103 2SC1623
Q104 2SC1623
Q105 2SC1623
Q106 2SC1623
Q107 2SA812
Q108 2SC1623
Q109 2SC1623
Q110 2SA812
+5V
R301 1K
+12V
R103 47K
R106 10K
R107 4700
R108 33K
D101
R101 100
R102 47K
R105 10K
C101 4.7 10V
R104 10K
C102 0.01
R109 220
D102 1S2835
R110 4700
C103 2.2 10V
R126 47K
R111 47K
R112 22K
R113 1K
R115 47K
C104 0.68 16V
R117 47K
R118 1K
R116 56K
C105 0.01
R114 47K
R120 56K
R124 1K
R125 47K
R123 15K
R121 10
R122 10K
C106 4.7 10V
R119 47K
SY-22, 4-3 | 430-3 | AUDIO CH-1 PB/EE IN
SY-22, 4-1 | 430-1 | H; AUDIO CH-1 REC IN
CH-1 HEAD SW (A) OUT | 433-1 | AU-49, 19-1
H; CH-1 REC MUTE OUT | 434-3 | AU-49, 20-3
CH-1 HEAD SW (B) OUT | 433-4 | AU-49, 19-4
AUDIO CH-1 PB/EE OUT | 433-3 | AU-49, 19-3
AUDIO CH-1 PB/EE IN | 436-1 | AU-64, 46-1
AUDIO CH-2 PB/EE IN | 436-2 | AU-64, 46-2
Q201 2SA812
Q202 2SC1623
Q203 2SC1623
Q204 2SC1623
Q205 2SC1623
Q206 2SC1623
Q207 2SA812
Q208 2SC1623
Q209 2SC1623
Q210 2SA812
C301 22 6.3V
R203 47K
R206 10K
R207 4700
R208 33K
D201
R201 100
R202 47K
R205 10K
C201 4.7 10V
R204 10K
C202 0.01
R209 220
D202 1S2835
R210 4700
C203 2.2 10V
R226 47K
R211 47K
R212 22K
R213 1K
C1 0.01
R215 47K
C204 0.68 16V
R217 47K
R218 1K
R216 56K
C205 0.01
R214 47K
R220 56K
R224 47K
R225 1K
R223 15K
R221 10
R222 10K
C206 4.7 10V
R219 47K
D301 RD9.1EB
SY-22, 4-4 | 430-4 | AUDIO CH-2 PB/EE IN
AU-49, 20-8 | 434-8 | GND
SY-22, 4-2 | 430-2 | H; AUDIO CH-2 REC IN
CH-2 HEAD SW (A) OUT | 433-7 | AU-49, 19-7
H; CH-2 REC MUTE OUT | 434-1 | AU-49, 20-1
CH-2 HEAD SW (B) OUT | 433-8 | AU-49, 19-8
AUDIO CH-2 PB/EE OUT | 433-5 | AU-49, 19-5
AU-51
1-611-950-16
VO-6800
VO-6800PS

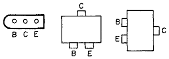
AU-51 (BIAS/ERASE OSC, REC/PB CONTROL)
DUS-3

S/N 13481 TO 14880 (UC)
S/N 10661 TO 11060 (J)


LV301
CN435

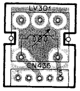
DUS-3
- SOLDERING SIDE -
1-611-961-11
VO-6800
VO-6800PS


RV101
TP303
R312
R212
Q204
R211
R226
D202
RV201
CN431
CN432
TP302
R311
R213
C203
R210
R111
R126
R301
D301
Q110
R125
R124
R123
Q109
R122
R113
R112
Q104
R110
D102
C311
CN433
Q210
R224
Q209
Q208
R121
C103
R225
R223
R221
R220
R219
R108
R106
R222
C206
C106
C301
Q103
Q102
R104
R103
R120
R119
Q108
R107
R109
C102
R105
Q101
R102
RY1
R305
C304
C303
Q202
Q203
R209
C101
R101
CP301
D303
TP301
E301
R306
Q207
C202
R206
R204
R208
R207
D101
C201
R201
R310
C307
Q304
CN434
C205
R218
R205
Q201
R202
D201
C308
R307
R216
R215
R203
R214
C309
R308
R217
C204
C104
CN430
Q303
Q107
Q206
Q205
R309
C305
C306
R115
R114
CN435
C302
Q302
R1
R303
Q306
C105
R117
R118
R116
Q106
Q105
Q301
R304
D302
C310

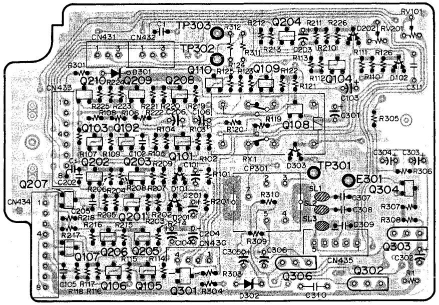


AU-51 -SOLDERING SIDE-
1-611-950-16
VO-6800
VO-6800PS

S/N 14881 AND LATER
S/N 11061 AND LATER


LV301
CN435

DUS-3
- SOLDERING SIDE -
1-611-961-11
VO-6800
VO-6800PS


RV101
C1
TP303
R312
R212
Q204
R211
R226
D202
RV201
CN431
CN432
TP302
R311
R213
C203
R210
R111
R126
R301
D301
Q110
R125
R124
R123
Q109
R122
R113
R112
Q104
R110
D102
C311
CN433
Q210
R224
Q209
Q208
R121
C103
R225
R223
R221
R220
R219
R108
R106
R222
C206
C106
C301
R305
Q103
Q102
R104
R103
R120
R119
Q108
R107
R109
C102
R105
Q101
R102
RY1
C304
C303
Q202
Q203
R209
C101
R101
CP301
D303
TP301
R306
E301
Q207
C202
R206
R204
R208
R207
D101
C201
R201
R310
SL1
C307
Q304
CN434
C205
R218
R205
Q201
R202
D201
SL2
C308
R307
R216
R215
R203
R214
SL3
C309
R308
R217
C204
C104
CN430
Q303
Q107
Q206
Q205
R309
C305
C306
R115
R114
CN435
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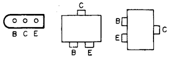
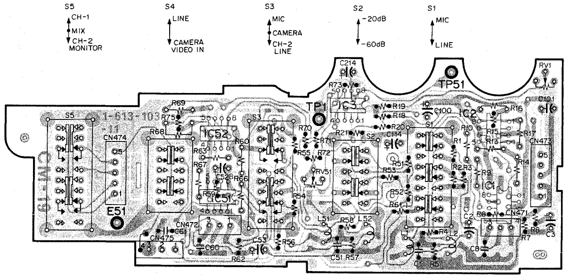
Q105
Q301
R304
D302
C310



AU-51 -SOLDERING SIDE-
1-611-950-17,18
VO-6800
VO-6800PS

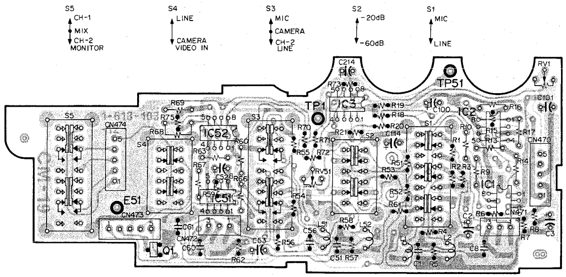
CM-19 (CAMERA/MIC INPUT SELECT)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


S5
CH-1
MIX
CH-2
MONITOR
S4
LINE
CAMERA
VIDEO IN
S3
MIC
CAMERA
CH-2
LINE
S2
-20dB
-60dB
S1
MIC
LINE
1-613-103-11
CN474
E51
IC52
IC51
IC3
IC2
IC1
TP1
TP51
RV1
CN470
CN471
CN472
CN475
C214
C100
C101

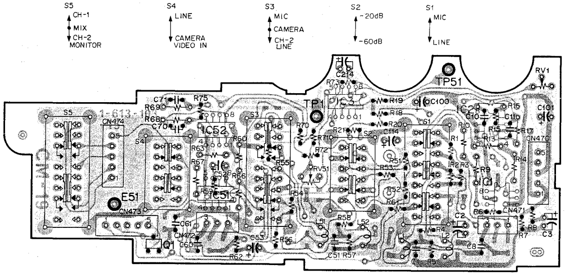
CM-19 —SOLDERING SIDE—
1-613-103-11
VO-6800

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)


S5
CH-1
MIX
CH-2
MONITOR
S4
LINE
CAMERA
VIDEO IN
S3
MIC
CAMERA
CH-2
LINE
S2
-20dB
-60dB
S1
MIC
LINE
1-613-103
CN474
CN473
E51
Q1
IC52
IC51
IC3
IC2
IC1
TP1
TP51
RV1
CN470
CN471
CN472
C214
C100
C101

CM-19 —SOLDERING SIDE—
1-613-103-12
VO-6800
VO-6800PS

S/N 12781 AND LATER (UC)
S/N 10561 AND LATER (J)

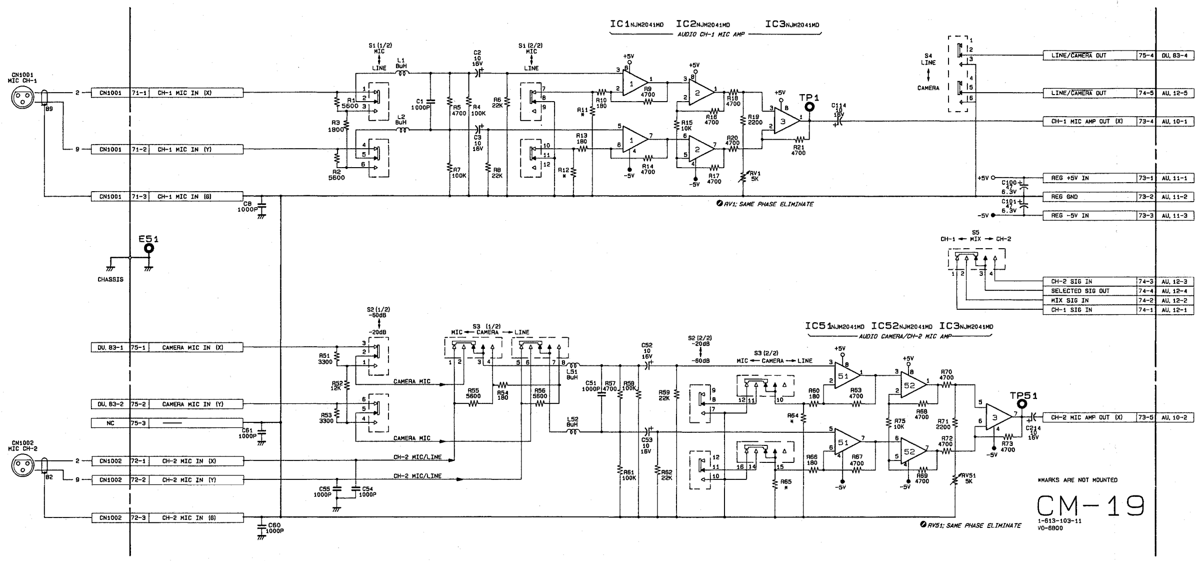

S5
CH-1
MIX
CH-2
MONITOR
S4
LINE
CAMERA
VIDEO IN
S3
MIC
CAMERA
CH-2
LINE
S2
-20dB
-60dB
S1
MIC
LINE
1-613-10
CN474
CN473
E51
Q1
IC52
IC51
IC3
IC2
IC1
TP1
TP51
RV1
CN470
CN471
CN472
C214
C100
C101

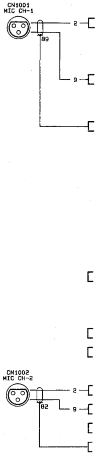
CM-19 —SOLDERING SIDE—
1-613-103-15
VO-6800
VO-6800PS

I- 9 (CAMERA/MIC INPUT SELECT)

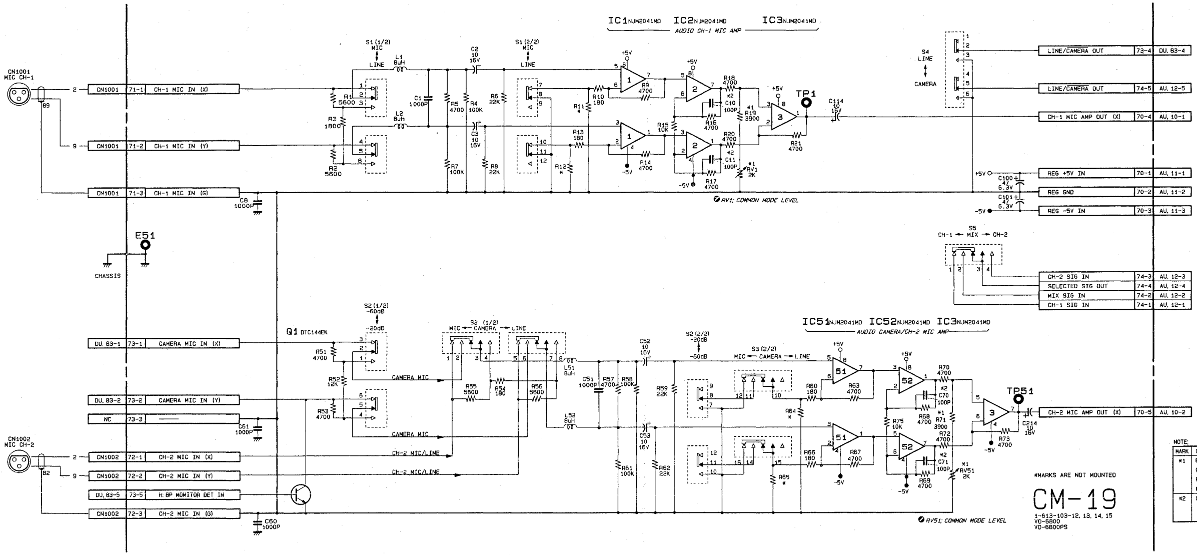
S/N 10001 TO 10030 (UC)
S N 10001 TO 10010 (J)

S/N 10031
S/N 10011


CN1001 MIC CH-1
CN1001 71-1 CH-1 MIC IN (X)
CN1001 71-2 CH-1 MIC IN (Y)
CN1001 71-3 CH-1 MIC IN (G)
S1 (1/2) MIC LINE
S1 (2/2) MIC LINE
IC1 NJM2041MD IC2 NJM2041MD IC3 NJM2041MD
AUDIO CH-1 MIC AMP
TP1
S4 LINE CAMERA
LINE/CAMERA OUT 75-4 DU, 83-4
LINE/CAMERA OUT 74-5 AU, 12-5
CH-1 MIC AMP OUT (X) 73-4 AU, 10-1
REG +5V IN 73-1 AU, 11-1
REG GND 73-2 AU, 11-2
REG -5V IN 73-3 AU, 11-3
RV1; SAME PHASE ELIMINATE
E51
CHASSIS
S5 CH-1 MIX CH-2
CH-2 SIG IN 74-3 AU, 12-3
SELECTED SIG OUT 74-4 AU, 12-4
MIX SIG IN 74-2 AU, 12-2
CH-1 SIG IN 74-1 AU, 12-1
S2 (1/2) -60dB -20dB
S3 (1/2) MIC CAMERA LINE
S2 (2/2) -20dB -60dB
S3 (2/2) MIC CAMERA LINE
IC51 NJM2041MD IC52 NJM2041MD IC3 NJM2041MD
AUDIO CAMERA/CH-2 MIC AMP
DU, 83-1 75-1 CAMERA MIC IN (X)
DU, 83-2 75-2 CAMERA MIC IN (Y)
NC 75-3 —
CN1002 MIC CH-2
CN1002 72-1 CH-2 MIC IN (X)
CN1002 72-2 CH-2 MIC IN (Y)
CN1002 72-3 CH-2 MIC IN (G)
CAMERA MIC
CH-2 MIC/LINE
TP51
CH-2 MIC AMP OUT (X) 73-5 AU, 10-2
RV51; SAME PHASE ELIMINATE
*MARKS ARE NOT MOUNTED
CM-19
1-613-103-11
VO-6800


CN1001 MIC CH-1
CN1002 MIC CH-2

S/N 10031 AND LATER (UC)
S/N 10011 AND LATER (J)

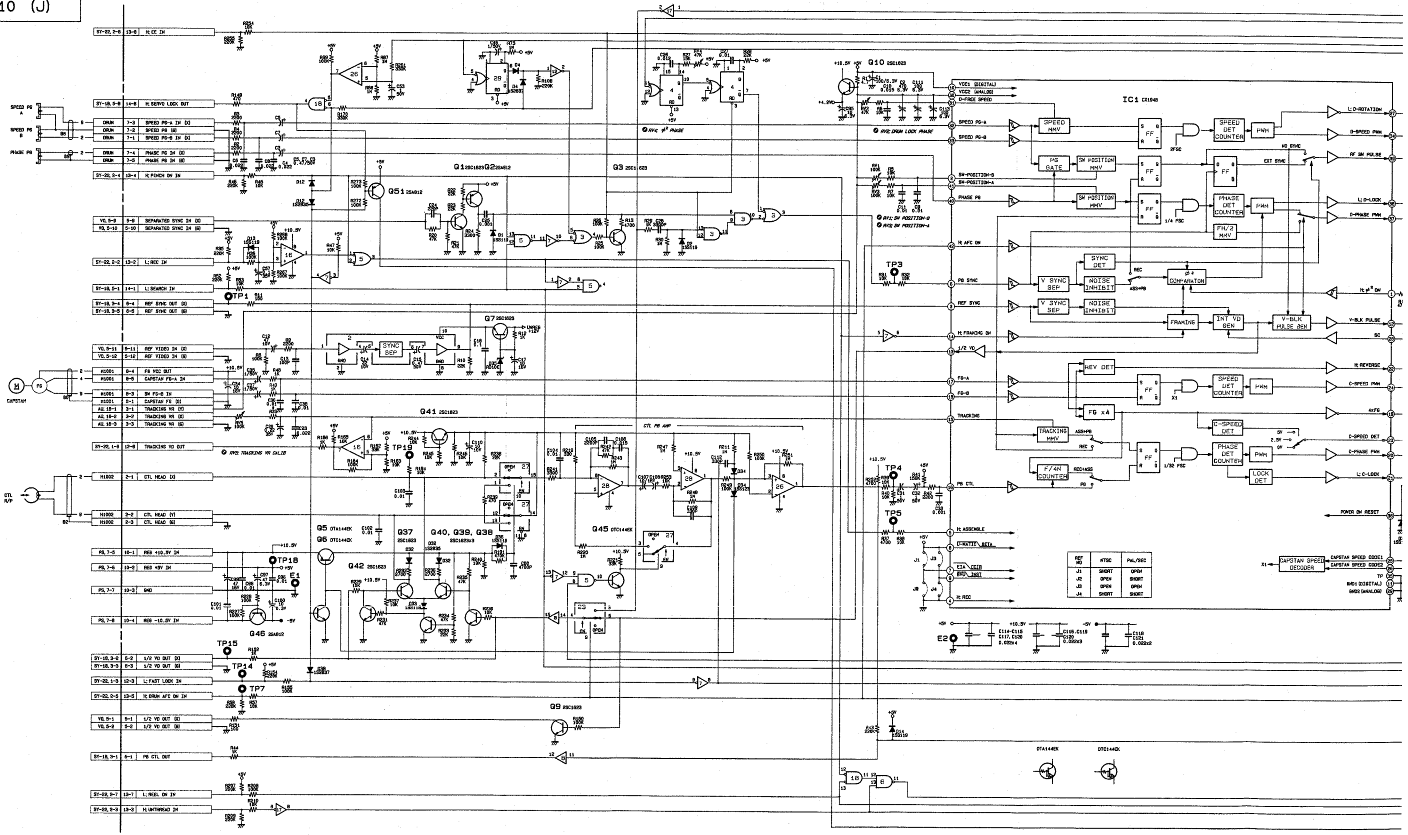

IC1 NJM2041MD IC2 NJM2041MD IC3 NJM2041MD
AUDIO CH-1 MIC AMP
CN1001 MIC CH-1
CN1001 | 71-1 | CH-1 MIC IN (X)
CN1001 | 71-2 | CH-1 MIC IN (Y)
CN1001 | 71-3 | CH-1 MIC IN (G)
S1 (1/2) MIC ↕ LINE
S1 (2/2) MIC ↕ LINE
L1 8uH
L2 8uH
R1 5600
R2 5600
R3 1800
C1 1000P
C2 10 16V
C3 10 16V
R4 100K
R5 4700
R6 22K
R7 100K
R8 22K
R9 4700
R10 180
R11 *
R12 *
R13 180
R14 4700
R15 10K
R16 4700
R17 4700
R18 4700
R19 3900
R20 4700
R21 4700
*2 C10 100P
*2 C11 100P
*1 RV1 2K
C114 10 16V
TP1
C8 1000P
E51
CHASSIS
RV1: COMMON MODE LEVEL
S4 LINE ↕ CAMERA
LINE/CAMERA OUT | 73-4 | DU, 83-4
LINE/CAMERA OUT | 74-5 | AU, 12-5
CH-1 MIC AMP OUT (X) | 70-4 | AU, 10-1
REG +5V IN | 70-1 | AU, 11-1
REG GND | 70-2 | AU, 11-2
REG -5V IN | 70-3 | AU, 11-3
C100 47 6.3V
C101 47 6.3V
S5 CH-1 ← MIX → CH-2
CH-2 SIG IN | 74-3 | AU, 12-3
SELECTED SIG OUT | 74-4 | AU, 12-4
MIX SIG IN | 74-2 | AU, 12-2
CH-1 SIG IN | 74-1 | AU, 12-1
IC51 NJM2041MD IC52 NJM2041MD IC3 NJM2041MD
AUDIO CAMERA/CH-2 MIC AMP
Q1 DTC144EK
S2 (1/2) -60dB ↕ -20dB
S2 (2/2) -20dB ↕ -60dB
S3 (1/2) MIC ← CAMERA → LINE
S3 (2/2) MIC ← CAMERA → LINE
DU, 83-1 | 73-1 | CAMERA MIC IN (X)
DU, 83-2 | 73-2 | CAMERA MIC IN (Y)
NC | 73-3
CN1002 MIC CH-2
CN1002 | 72-1 | CH-2 MIC IN (X)
CN1002 | 72-2 | CH-2 MIC IN (Y)
DU, 83-5 | 73-5 | H: 8P MOMITOR DET IN
CN1002 | 72-3 | CH-2 MIC IN (G)
CAMERA MIC
CH-2 MIC/LINE
R51 4700
R52 12K
R53 4700
R54 180
R55 5600
R56 5600
R57 4700
R58 100K
R59 22K
R60 180
R61 100K
R62 22K
R63 4700
R64 *
R65 *
R66 180
R67 4700
R68 4700
R69 4700
R70 4700
R71 3900
R72 4700
R73 4700
R75 10K
L51 8uH
L52 8uH
C51 1000P
C52 10 16V
C53 10 16V
C60 1000P
C61 1000P
*2 C70 100P
*2 C71 100P
*1 RV51 2K
C214 10 16V
TP51
CH-2 MIC AMP OUT (X) | 70-5 | AU, 10-2
RV51: COMMON MODE LEVEL
*MARKS ARE NOT MOUNTED
CM-19
1-613-103-12, 13, 14, 15
VO-6800
VO-6800PS

NOTE:

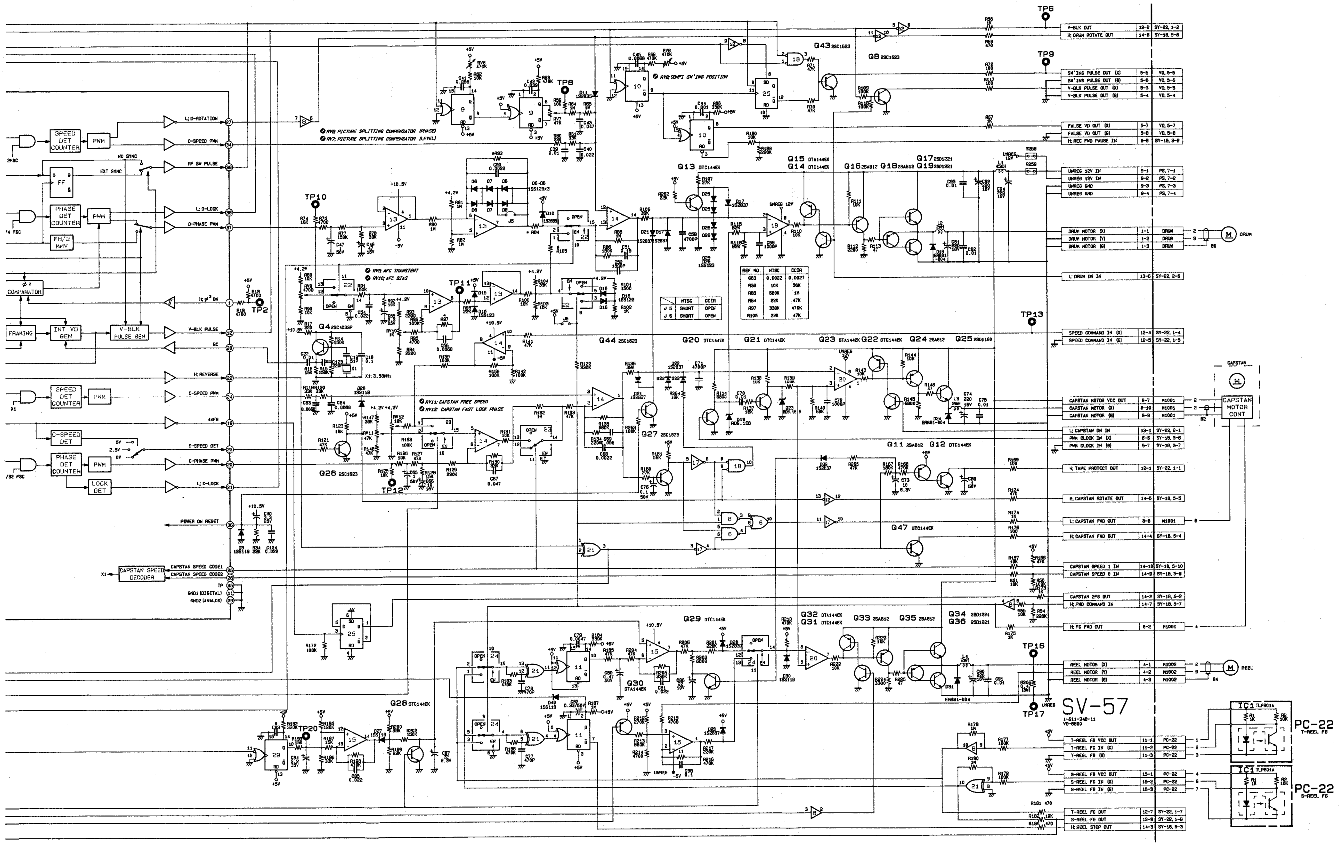
MARK	CHANGE INFORMATION	SERIAL NO.
*1	R19, R71) 2200 → 3900 RV1, RV51) 5K → 2K	UC; 11031 AND LATER J ; 10311 AND LATER EK; 11021 AND LATER
*2	C10, 11, 70, 71 100P ADDED	UC; 11591 AND LATER J ; 10361 AND LATER EK; 11621 AND LATER

V 57 (DRUM/CAPSTAN/REEL SERVO)
C 22 (REEL FG)

/N 10001 TO 10030 (UC)
/N 10001 TO 10010 (J)

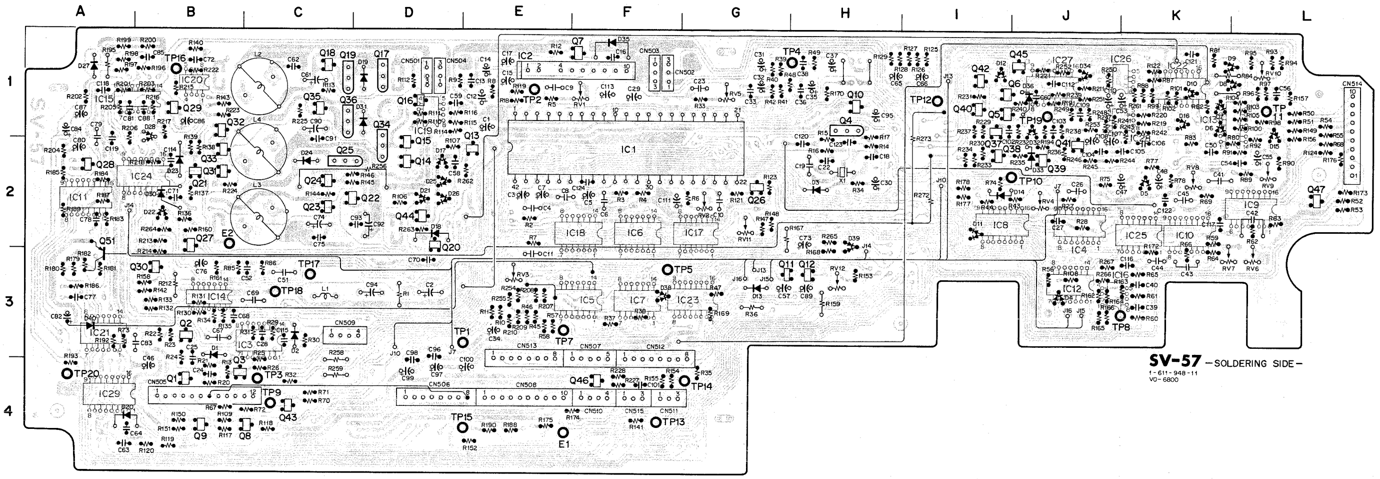

IC1 CX1948
SPEED PG A
SPEED PG B
PHASE PG
CAPSTAN
CTL R/P
SPEED MMV
PG GATE
SW POSITION MMV
SPEED DET COUNTER
PHASE DET COUNTER
FH/2 MMV
PWM
SYNC DET
V SYNC SEP
NOISE INHIBIT
COMPARATOR
FRAMING
INT VD GEN
V-BLK PULSE GEN
HEV DET
FG x4
TRACKING MMV
C-SPEED DET
F/4N COUNTER
LOCK DET
CAPSTAN SPEED DECODER
SYNC SEP
CTL PB AMP
Q1 2SC1623
Q2 2SA812
Q3 2SC1623
Q5 DTA144EK
Q6 DTC144EK
Q7 2SC1623
Q9 2SC1623
Q10 2SC1623
Q37 2SC1623
Q40, Q39, Q38 2SC1623x3
Q41 2SC1623
Q42 2SC1623
Q45 DTC144EK
Q46 2SA812
Q51 2SA812
TP1
TP3
TP4
TP5
TP7
TP14
TP15
TP18
TP19
E1
E2
RV1: SW POSITION-B
RV3: SW POSITION-A
RV2: DRUM LOCK PHASE
RV4: φ² PHASE
RV5: TRACKING VR CALIB
L: D-ROTATION
D-SPEED PWM
RF SW PULSE
L: D-LOCK
D-PHASE PWM
H: φ² ON
V-BLK PULSE
SC
H: REVERSE
C-SPEED PWM
4xFG
C-SPEED DET
C-PHASE PWM
L: C-LOCK
POWER ON RESET
CAPSTAN SPEED CODE1
CAPSTAN SPEED CODE2
DTA144EK
DTC144EK
C114-C115 C117, C120 0.022x4
C116.C119 C120 0.022x3
C118 C121 0.022x2

REF NO	NTSC	PAL/SEC
J1	SHORT	OPEN
J2	OPEN	SHORT
J3	OPEN	OPEN
J4	SHORT	SHORT

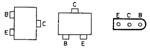

SPEED DET COUNTER
PWM
L; D-ROTATION
D-SPEED PWM
2FSC
NO SYNC
EXT SYNC
FF
RF SW PULSE
PHASE DET COUNTER
L; D-LOCK
D-PHASE PWM
/4 FSC
FH/2 MMV
ϕ² COMPARATOR
H; ϕ² ON
TP2
FRAMING
INT VD GEN
V-BLK PULSE GEN
V-BLK PULSE
SC
H; REVERSE
C-SPEED PWM
X1
4xFG
C-SPEED DET
5V
2.5V
0V
C-SPEED DET
C-PHASE PWM
/32 FSC
LOCK DET
L; C-LOCK
POWER ON RESET
CAPSTAN SPEED DECODER
CAPSTAN SPEED CODE1
CAPSTAN SPEED CODE2
TP
GND1 (DIGITAL)
GND2 (ANALOG)
RV6; PICTURE SPLITTING COMPENSATOR (PHASE)
RV7; PICTURE SPLITTING COMPENSATOR (LEVEL)
RV8; CONFI SW'ING POSITION
RV9; AFC TRANSIENT
RV10; AFC BIAS
RV11; CAPSTAN FREE SPEED
RV12; CAPSTAN FAST LOCK PHASE
TP6
TP8
TP9
TP10
TP11
TP12
TP13
TP16
TP17
TP20
Q4 2SC4038P
Q8 2SC1623
Q11 2SA812
Q12 DTC144EK
Q13 DTC144EK
Q14 DTC144EK
Q15 DTA144EK
Q16 2SA812
Q17 2SD1221
Q18 2SA812
Q19 2SD1221
Q20 DTC144EK
Q21 DTC144EK
Q22 DTC144EK
Q23 DTA144EK
Q24 2SA812
Q25 2SD1180
Q26 2SC1623
Q27 2SC1623
Q28 DTC144EK
Q29 DTC144EK
Q30 DTA144EK
Q31 DTC144EK
Q32 DTA144EK
Q33 2SA812
Q34 2SD1221
Q35 2SA812
Q36 2SD1221
Q43 2SC1623
Q44 2SC1623
Q47 DTC144EK
X1 3.58MHz
	NTSC	CCIR
J 5	SHORT	OPEN
J 6	SHORT	OPEN
REF NO.	NTSC	CCIR
C83	0.0022	0.0027
R33	10K	56K
R83	680K	1M
R84	22K	47K
R97	330K	470K
R105	22K	47K
V-BLK OUT | 12-2 | SY-22, 1-2
H; DRUM ROTATE OUT | 14-6 | SY-18, 5-6
SW'ING PULSE OUT (X) | 5-5 | VO, 5-5
SW'ING PULSE OUT (G) | 5-6 | VO, 5-6
V-BLK PULSE OUT (X) | 5-3 | VO, 5-3
V-BLK PULSE OUT (G) | 5-4 | VO, 5-4
FALSE VD OUT (X) | 5-7 | VO, 5-7
FALSE VD OUT (G) | 5-8 | VO, 5-8
H; REC FWD PAUSE IN | 6-8 | SY-18, 3-8
UNREG 12V IN | 9-1 | PS, 7-1
UNREG 12V IN | 9-2 | PS, 7-2
UNREG GND | 9-3 | PS, 7-3
UNREG GND | 9-4 | PS, 7-4
DRUM MOTOR (X) | 1-1 | DRUM
DRUM MOTOR (Y) | 1-2 | DRUM
DRUM MOTOR (G) | 1-3 | DRUM
DRUM
L; DRUM ON IN | 13-6 | SY-22, 2-6
SPEED COMMAND IN (X) | 12-4 | SY-22, 1-4
SPEED COMMAND IN (G) | 12-5 | SY-22, 1-5
CAPSTAN
CAPSTAN MOTOR CONT
CAPSTAN MOTOR VCC OUT | 8-7 | M1001
CAPSTAN MOTOR (X) | 8-10 | M1001
CAPSTAN MOTOR (G) | 8-9 | M1001
L; CAPSTAN ON IN | 13-1 | SY-22, 2-1
PWM CLOCK IN (X) | 6-6 | SY-18, 3-6
PWM CLOCK IN (G) | 6-7 | SY-18, 3-7
H; TAPE PROTECT OUT | 12-1 | SY-22, 1-1
H; CAPSTAN ROTATE OUT | 14-5 | SY-18, 5-5
L; CAPSTAN FWD OUT | 8-8 | M1001
H; CAPSTAN FWD OUT | 14-4 | SY-18, 5-4
CAPSTAN SPEED 1 IN | 14-10 | SY-18, 5-10
CAPSTAN SPEED 0 IN | 14-9 | SY-18, 5-9
CAPSTAN 2FG OUT | 14-2 | SY-18, 5-2
H; FWD COMMAND IN | 14-7 | SY-18, 5-7
H; FG FWD OUT | 8-2 | M1001
REEL MOTOR (X) | 4-1 | M1002
REEL MOTOR (Y) | 4-2 | M1002
REEL MOTOR (G) | 4-3 | M1002
REEL
SV-57
1-611-948-11
VO-6800
T-REEL FG VCC OUT | 11-1 | PC-22
T-REEL FG IN (X) | 11-2 | PC-22
T-REEL FG (G) | 11-3 | PC-22
S-REEL FG VCC OUT | 15-1 | PC-22
S-REEL FG IN (X) | 15-2 | PC-22
S-REEL FG IN (G) | 15-3 | PC-22
T-REEL FG OUT | 12-7 | SY-22, 1-7
S-REEL FG OUT | 12-8 | SY-22, 1-8
H; REEL STOP OUT | 14-3 | SY-18, 5-3
IC1 TLP801A
PC-22
T-REEL FG
IC1 TLP801A
PC-22
S-REEL FG

SV-57 (DRUM/CAPSTAN/REEL SERVO)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC23
IC24
IC25
IC26
IC27
IC29
L1
L2
L3
L4
TP1
TP2
TP3
TP4
TP5
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
E1
E2
CN501
CN502
CN503
CN504
CN505
CN506
CN507
CN508
CN509
CN510
CN511
CN512
CN513
CN514
CN515
X1
SV-57

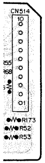
SV-57 -SOLDERING SIDE-
1-611-948-11
VO-6800



CN501	D - 1	D20	A - 4	IC13	K - 1	Q18	C - 1	RV4	J - 2
CN502	F - 1	D21	D - 2	IC14	B - 3	Q19	C - 1	RV5	G - 1
CN503	F - 1	D22	B - 2	IC15	A - 1	Q20	D - 2	RV6	L - 3
CN504	D - 1	D23	B - 2	IC16	J - 3	Q21	B - 2	RV7	K - 3
CN505	B - 4	D24	C - 2	IC17	G - 2	Q22	D - 2	RV8	K - 2
CN506	D - 4	D25	D - 2	IC18	F - 2	Q23	C - 2	RV9	L - 2
CN507	F - 3	D26	D - 2	IC19	D - 1	Q24	C - 2	RV10	L - 1
CN508	E - 4	D27	A - 1	IC20	B - 1	Q25	C - 2	RV11	G - 2
CN509	C - 3	D28	B - 1	IC21	A - 3	Q26	G - 2	RV12	H - 3
CN510	F - 4	D30	B - 2	IC22	K - 1	Q27	B - 2		
CN511	F - 4	D31	D - 1	IC23	G - 3	Q28	A - 2	TP1	E - 3
CN512	F - 3	D32	J - 1	IC24	B - 2	Q29	B - 1	TP2	E - 1
CN513	E - 3	D33	J - 2	IC25	K - 2	Q30	B - 3	TP3	C - 4
CN514	L - 1	D34	J - 1	IC26	K - 1	Q31	B - 2	TP4	H - 1
CN515	F - 4	D35	F - 1	IC27	J - 1	Q32	B - 1	TP5	F - 3
		D36	J - 1	IC28	K - 1	Q33	B - 2	TP7	E - 3
D1	B - 3	D38	F - 3	IC29	A - 4	Q34	D - 1	TP8	K - 3
D2	C - 3	D39	H - 2			Q35	C - 1	TP9	C - 4
D3	H - 2	D40	A - 3	Q1	B - 4	Q36	C - 1	TP10	J - 2
D4	J - 3			Q2	B - 3	Q37	I - 1	TP11	L - 1
D5	K - 2	E1	E - 4	Q3	B - 4	Q38	I - 2	TP12	I - 1
D6	K - 1	E2	B - 2	Q4	H - 1	Q39	J - 2	TP13	F - 4
D7	K - 1			Q5	I - 1	Q40	I - 1	TP14	G - 4
D8	L - 1	IC1	F - 2	Q6	I - 1	Q41	J - 2	TP15	E - 4
D9	K - 1	IC2	E - 1	Q7	F - 1	Q42	I - 1	TP16	B - 1
D10	K - 1	IC3	C - 3	Q8	C - 4	Q43	C - 4	TP17	C - 3
D11	I - 2	IC4	J - 2	Q9	B - 4	Q44	D - 2	TP18	C - 3
D12	I - 1	IC5	F - 3	Q10	H - 1	Q45	J - 1	TP19	J - 1
D13	G - 3	IC6	F - 2	Q11	G - 3	Q46	F - 4	TP20	A - 3
D14	I - 2	IC7	F - 3	Q12	H - 3	Q47	L - 2		
D15	L - 1	IC8	I - 2	Q13	E - 2	Q51	A - 3	X1	H - 2
D16	K - 1	IC9	L - 2	Q14	D - 2				
D17	D - 2	IC10	K - 2	Q15	D - 2	RV1	F - 1		
D18	D - 2	IC11	A - 2	Q16	D - 1	RV2	G - 2		
D19	D - 1	IC12	J - 3	Q17	D - 1	RV3	E - 3		

Ref. No.	Type	Pin No.				
		+12V	+10.5V	+5V	GND	−5V
IC 1	CX194B			*	11, 29	
IC 2	BX3915A			*	2, 8	
IC 3	TC4011BF			14	7	
IC 4	TC4538BF			16	8	
IC 5	TC4011BF			14	7	
IC 6	TC4011BF			14	7	
IC 7	TC4069UBF			14	7	
IC 8	TC4050BF			1	8	
IC 9	TC4538BF			16	8	
IC 10	TC4538BF			16	8	
IC 11	TC4538BF			16	8	
IC 12	TC4069UBF			14	7	
IC 13	μPC324G2		4			11
IC 14	μPC324G2		4			11
IC 15	μPC324G2		4			11
IC 16	μPC393G2		8		4	
IC 17	TC4069UBF			14	7	
IC 18	TC4001BF			14	7	
IC 19	μPC393G2	8			4	
IC 20	μPC393G2	8			4	
IC 21	TC4030BF			14	7	
IC 22	TC4053BF			16	8	7
IC 23	TC4053BF			16	8	7
IC 24	TC4053BF			16	8	7
IC 25	TC4013BF			14	7	
IC 26	μPC393G2		8		4	
IC 27	TC4053BF		16		7, 8	
IC 28	μPC4558G2		8		4	
IC 29	TC4538BF			16	8	

*REFER TO SCHEMATIC


CN514
10
1
R173
R52
R53

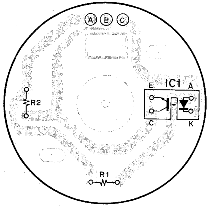
-5V

11
11
11

7
7
7

HEMATIC

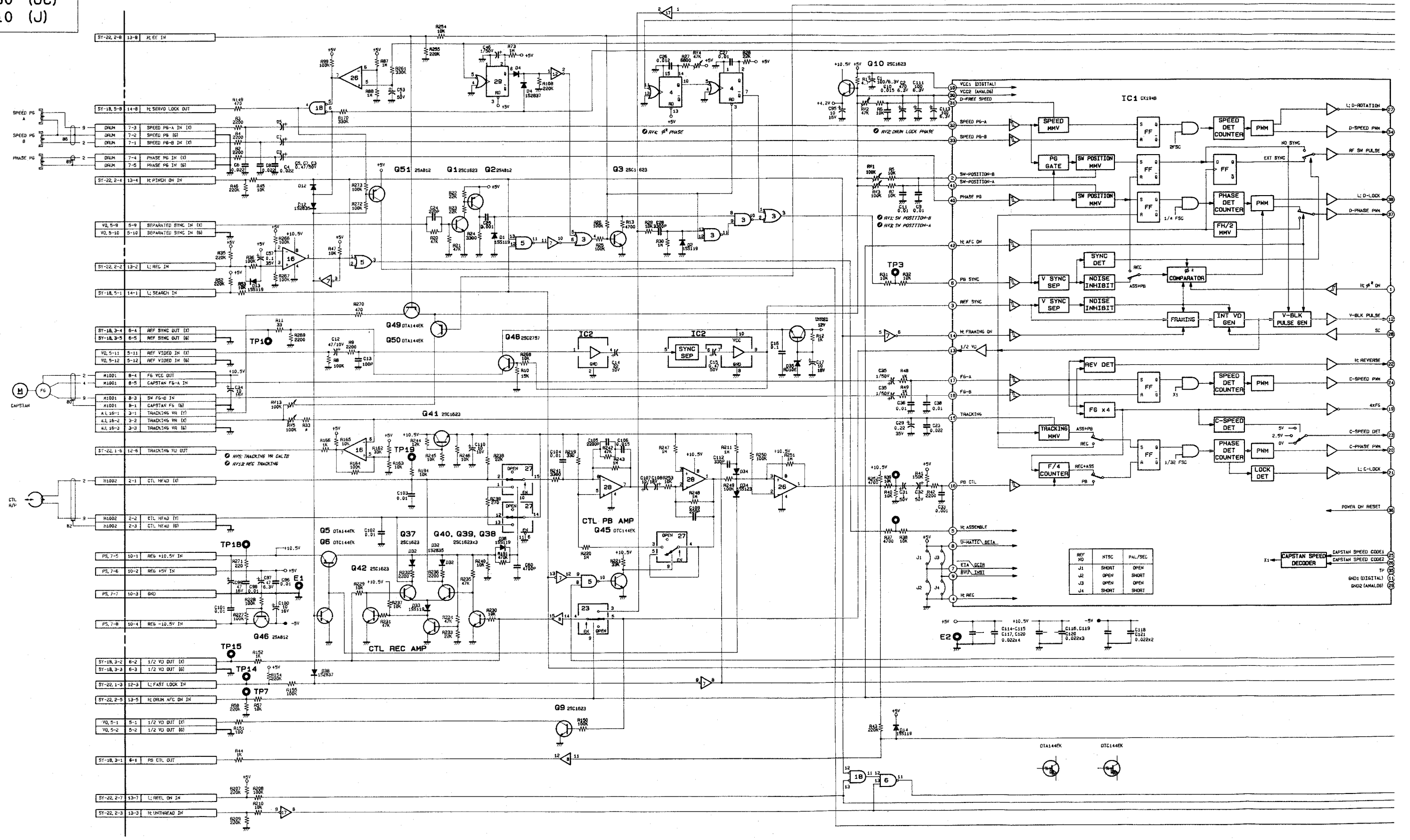
PC-22 (REEL FG)


A
B
C
IC1
E
A
C
K
R2
R1

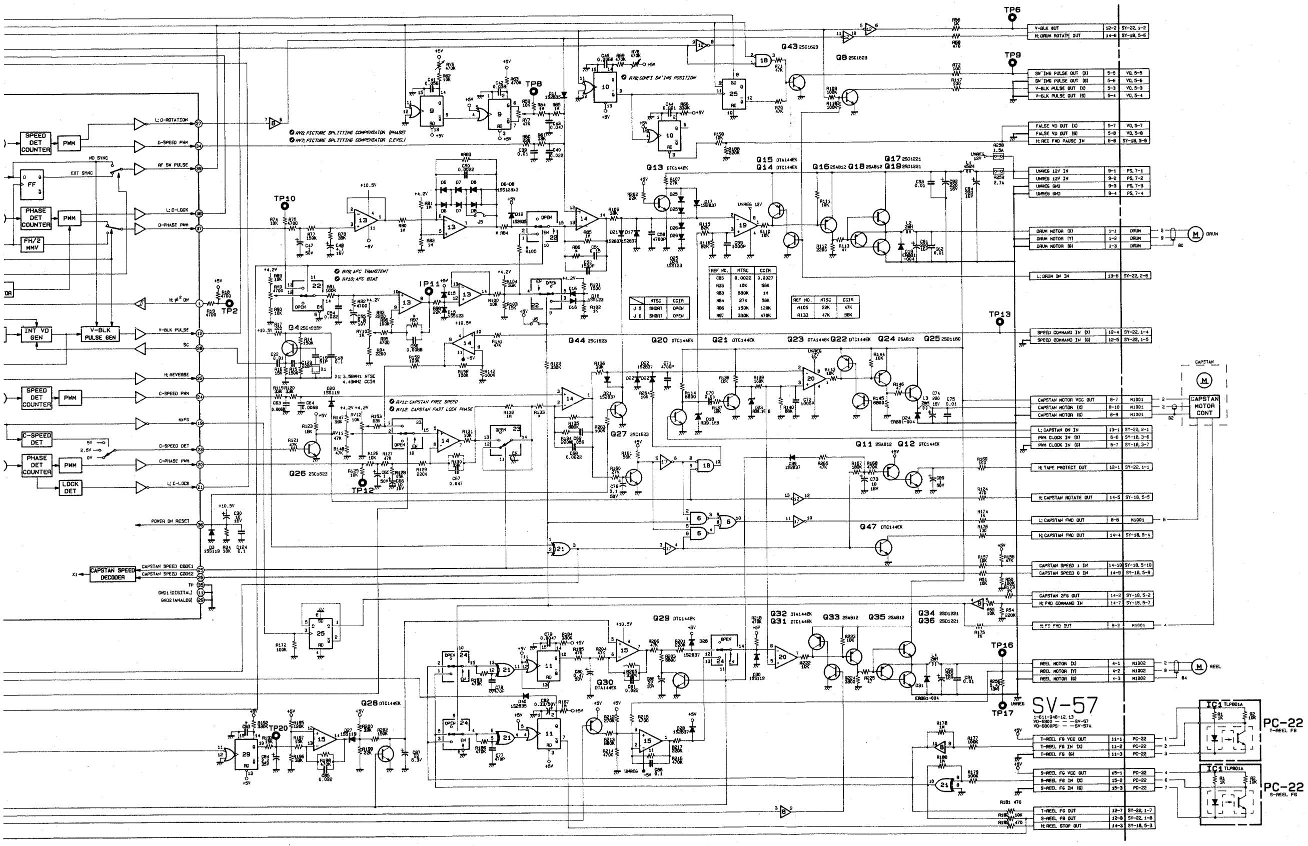
PC-22 -SOLDERING SIDE-
1-611-960-11,12
VO-6800

S' -57 (DRUM/CAPSTAN/REEL SERVO)
P(-22 (REEL FG)

S/N 10031 TO 13980 (UC)
/N 10011 TO 10910 (J)


SPEED PG A
SPEED PG B
PHASE PG
CAPSTAN
CTL R/P
SY-22, 2-8 H: EE IN
SY-18, 5-8 H: SERVO LOCK OUT
SPEED PG-A IN
SPEED PG IN
SPEED PG-B IN
PHASE PG IN
H: PINCH ON IN
SEPARATED SYNC IN
L: REC IN
L: SEARCH IN
REF SYNC OUT
REF VIDEO IN
FG VCC OUT
CAPSTAN FG-A IN
SW FG-B IN
CAPSTAN FG
TRACKING VR
TRACKING VD OUT
CTL HEAD
REG +10.5V IN
REG +5V IN
GND
REG -10.5V IN
1/2 VD OUT
L: FAST LOCK IN
H: DRUM AFC ON IN
PB CTL OUT
L: REEL ON IN
H: UNTHREAD IN
TP1
TP3
TP7
TP14
TP15
TP18
TP19
E1
E2
Q1 2SC1623
Q2 2SA812
Q3 2SC1623
Q5 DTA144EK
Q6 DTC144EK
Q9 2SC1623
Q10 2SC1623
Q37 2SC1623
Q40, Q39, Q38 2SC1623x3
Q41 2SC1623
Q42 2SC1623
Q45 DTC144EK
Q46 2SA812
Q48 2SC2757
Q49 DTA144EK
Q50 DTA144EK
Q51 2SA812
IC1 CX194B
IC2
SYNC SEP
CTL PB AMP
CTL REC AMP
RV4: ϕ² PHASE
RV2: DRUM LOCK PHASE
RV1: SW POSITION-B
RV3: SW POSITION-A
RV5: TRACKING VR CALIB
RV13: REC TRACKING
VCC1 (DIGITAL)
VCC2 (ANALOG)
D-FREE SPEED
SPEED PG-A
SPEED PG-B
SW-POSITION-B
SW-POSITION-A
PHASE PG
H: AFC ON
PB SYNC
REF SYNC
H: FRAMING ON
1/2 VD
FG-A
FG-B
TRACKING
PB CTL
H: ASSEMBLE
U-MATIC BETA
EIA CCIR
8VD 1NS1
H: REC
SPEED MMV
PG GATE
SW POSITION MMV
FF
SPEED DET COUNTER
PHASE DET COUNTER
PWM
FH/2 MMV
SYNC DET
V SYNC SEP
NOISE INHIBIT
COMPARATOR
FRAMING
INT VD GEN
V-BLK PULSE GEN
REV DET
FG x4
TRACKING MMV
F/4 COUNTER
C-SPEED DET
LOCK DET
2FSC
1/4 FSC
1/32 FSC
NO SYNC
EXT SYNC
REC
ASS+PB
REC+ASS
PB
L: D-ROTATION
D-SPEED PWM
RF SW PULSE
L: D-LOCK
D-PHASE PWM
H: ϕ² ON
V-BLK PULSE
SC
H: REVERSE
C-SPEED PWM
4xFG
C-SPEED DET
C-PHASE PWM
L: C-LOCK
POWER ON RESET
CAPSTAN SPEED DECODER
CAPSTAN SPEED CODE1
CAPSTAN SPEED CODE2
TP
GND1 (DIGITAL)
GND2 (ANALOG)
DTA144EK
DTC144EK

REF NO	NTSC	PAL/SEC
J1	SHORT	OPEN
J2	OPEN	SHORT
J3	OPEN	OPEN
J4	SHORT	SHORT


SPEED DET COUNTER
PWM
L; D-ROTATION
D-SPEED PWM
NO SYNC
EXT SYNC
FF
RF SW PULSE
PHASE DET COUNTER
L; D-LOCK
D-PHASE PWM
FH/2 MMV
INT VD GEN
V-BLK PULSE GEN
V-BLK PULSE
SC
H; REVERSE
C-SPEED PWM
4xFG
C-SPEED DET
C-PHASE PWM
LOCK DET
L; C-LOCK
POWER ON RESET
CAPSTAN SPEED DECODER
CAPSTAN SPEED CODE1
CAPSTAN SPEED CODE2
TP
GND1 (DIGITAL)
GND2 (ANALOG)
RV6: PICTURE SPLITTING COMPENSATOR (PHASE)
RV7: PICTURE SPLITTING COMPENSATOR (LEVEL)
RV8: CONFI SW'ING POSITION
RV9: AFC TRANSIENT
RV10: AFC BIAS
RV11: CAPSTAN FREE SPEED
RV12: CAPSTAN FAST LOCK PHASE
X1: 3.58MHz NTSC 4.43MHz CCIR
TP2
TP6
TP8
TP9
TP10
TP11
TP12
TP13
TP16
TP17
TP20
Q4 2SC4025P
Q8 2SC1623
Q11 2SA812
Q12 DTC144EK
Q13 DTC144EK
Q14 DTC144EK
Q15 DTA144EK
Q16 2SA812
Q17 2SD1221
Q18 2SA812
Q19 2SD1221
Q20 DTC144EK
Q21 DTC144EK
Q22 DTC144EK
Q23 DTA144EK
Q24 2SA812
Q25 2SD1180
Q26 2SC1623
Q27 2SC1623
Q28 DTC144EK
Q29 DTC144EK
Q30 DTA144EK
Q31 DTC144EK
Q32 DTA144EK
Q33 2SA812
Q34 2SD1221
Q35 2SA812
Q36 2SD1221
Q43 2SC1623
Q44 2SC1623
Q47 DTC144EK
V-BLK OUT 12-2 SY-22, 1-2
H; DRUM ROTATE OUT 14-6 SY-18, 5-6
SW'ING PULSE OUT (X) 5-5 VD, 5-5
SW'ING PULSE OUT (G) 5-6 VD, 5-6
V-BLK PULSE OUT (X) 5-3 VD, 5-3
V-BLK PULSE OUT (G) 5-4 VD, 5-4
FALSE VD OUT (X) 5-7 VD, 5-7
FALSE VD OUT (G) 5-8 VD, 5-8
H; REC FWD PAUSE IN 6-8 SY-18, 3-8
R258 1.5A
R259 2.7A
UNREG 12V IN 9-1 PS, 7-1
UNREG 12V IN 9-2 PS, 7-2
UNREG GND 9-3 PS, 7-3
UNREG GND 9-4 PS, 7-4
DRUM MOTOR (X) 1-1 DRUM
DRUM MOTOR (Y) 1-2 DRUM
DRUM MOTOR (G) 1-3 DRUM
DRUM
L; DRUM ON IN 13-6 SY-22, 2-6
SPEED COMMAND IN (X) 12-4 SY-22, 1-4
SPEED COMMAND IN (G) 12-5 SY-22, 1-5
CAPSTAN
CAPSTAN MOTOR CONT
CAPSTAN MOTOR VCC OUT 8-7 M1001
CAPSTAN MOTOR (X) 8-10 M1001
CAPSTAN MOTOR (G) 8-9 M1001
L; CAPSTAN ON IN 13-1 SY-22, 2-1
PWM CLOCK IN (X) 6-6 SY-18, 3-6
PWM CLOCK IN (G) 6-7 SY-18, 3-7
H; TAPE PROTECT OUT 12-1 SY-22, 1-1
H; CAPSTAN ROTATE OUT 14-5 SY-18, 5-5
L; CAPSTAN FWD OUT 8-8 M1001
H; CAPSTAN FWD OUT 14-4 SY-18, 5-4
CAPSTAN SPEED 1 IN 14-10 SY-18, 5-10
CAPSTAN SPEED 0 IN 14-9 SY-18, 5-9
CAPSTAN 2FG OUT 14-2 SY-18, 5-2
H; FWD COMMAND IN 14-7 SY-18, 5-7
H; FG FWD OUT 8-2 M1001
REEL MOTOR (X) 4-1 M1002
REEL MOTOR (Y) 4-2 M1002
REEL MOTOR (G) 4-3 M1002
REEL
SV-57
1-611-948-12, 13
VD-6800 — — —SV-57
VD-6800PS — — —SV-57A
T-REEL FG VCC OUT 11-1 PC-22
T-REEL FG IN (X) 11-2 PC-22
T-REEL FG (G) 11-3 PC-22
S-REEL FG VCC OUT 15-1 PC-22
S-REEL FG IN (X) 15-2 PC-22
S-REEL FG IN (G) 15-3 PC-22
T-REEL FG OUT 12-7 SY-22, 1-7
S-REEL FG OUT 12-8 SY-22, 1-8
H; REEL STOP OUT 14-3 SY-18, 5-3
IC1 TLP801A
PC-22
T-REEL FG
PC-22
S-REEL FG

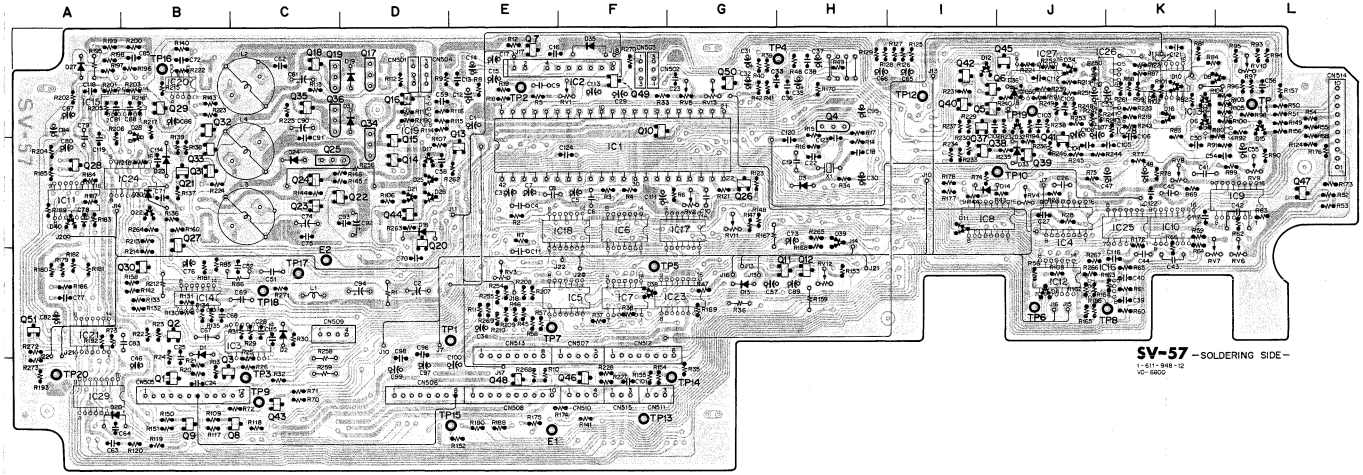
	NTSC	CCIR
J 5	SHORT	OPEN
J 6	SHORT	OPEN

REF NO.	NTSC	CCIR
C83	0.0022	0.0027
R33	10K	56K
R83	680K	1M
R84	27K	56K
R86	150K	120K
R97	330K	470K

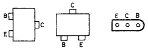
REF NO.	NTSC	CCIR
R105	22K	47K
R133	47K	56K

-57 (DRUM/CAPSTAN/REEL SERVO)

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)



SV-57 -SOLDERING SIDE-
1-611-948-12
VO-6800

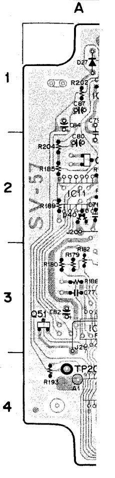


CN501	D - 1
CN502	F - 1
CN503	F - 1
CN504	D - 1
CN505	B - 4
CN506	D - 4
CN507	F - 3
CN508	E - 4
CN509	C - 3
CN510	F - 4
CN511	F - 4
CN512	F - 3
CN513	E - 3
CN514	L - 1
CN515	F - 4
D1	B - 3
D2	C - 3
D3	H - 2
D4	J - 3
D6	K - 1
D7	K - 1
D8	L - 1
D10	K - 1
D11	I - 2
D12	I - 1
D13	G - 3
D14	I - 2
D15	L - 1
D16	K - 1
D17	D - 2
D18	D - 2
D19	D - 1
D20	A - 4
D21	D - 2
D22	B - 2
D23	B - 2
D24	C - 2
D25	D - 2
D26	D - 2
D27	A - 1
D28	B - 1
D30	B - 2
D31	D - 1
D32	J - 1
D33	J - 2
D34	J - 1
D35	F - 1
D36	J - 1
D38	F - 3
D39	H - 2
D40	A - 2
E1	E - 4
E2	C - 3
IC1	F - 2
IC2	E - 1
IC3	C - 3
IC4	J - 2
IC5	F - 3
IC6	F - 2
IC7	F - 3
IC8	I - 2
IC9	L - 2
IC10	K - 2
IC11	A - 2
IC12	J - 3
IC13	K - 1
IC14	B - 3
IC15	A - 1
IC16	J - 3
IC17	G - 2
IC18	F - 2
IC19	D - 1
IC20	B - 1
IC21	A - 3
IC22	K - 1
IC23	G - 3
IC24	B - 2
IC25	K - 2
IC26	K - 1
IC27	J - 1
IC28	K - 1
IC29	A - 4
Q1	B - 4
Q2	B - 3
Q3	B - 4
Q4	H - 1
Q5	I - 1
Q6	I - 1
Q7	F - 1
Q8	C - 4
Q9	B - 4
Q10	F - 1
Q11	G - 3
Q12	H - 3
Q13	E - 2
Q14	D - 2
Q15	D - 2
Q16	D - 1
Q17	D - 1
Q18	C - 1
Q19	C - 1
Q20	D - 2
Q21	B - 2
Q22	D - 2
Q23	C - 2
Q24	C - 2
Q25	C - 2
Q26	G - 2
Q27	B - 2
Q28	A - 2
Q29	B - 1
Q30	B - 3
Q31	B - 2
Q32	B - 1
Q33	B - 2
Q34	D - 2
Q35	C - 1
Q36	C - 1
Q37	I - 1
Q38	I - 2
Q39	J - 2
Q40	I - 1
Q41	J - 2
Q42	I - 1
Q43	C - 4
Q44	D - 2
Q45	J - 1
Q46	F - 4
Q47	L - 2
Q49	F - 1
Q50	G - 1
Q51	A - 3
RV1	F - 1
RV2	G - 2
RV3	E - 3
RV4	J - 2
RV5	G - 1
RV6	L - 3
RV7	K - 3
RV8	K - 2
RV9	L - 2
RV10	L - 1
RV11	G - 2
RV12	H - 3
RV13	G - 1
TP1	E - 3
TP2	E - 1
TP3	C - 4
TP4	H - 1
TP5	F - 3
TP6	J - 3
TP7	E - 3
TP8	K - 3
TP9	C - 4
TP10	J - 2
TP11	L - 1
TP12	I - 1
TP13	F - 4
TP14	G - 4
TP15	E - 4
TP16	B - 1
TP17	C - 3
TP18	C - 3
TP19	J - 1
TP20	A - 4
X1	H - 2

Ref. No.	Type	Pin No.				
		+12V	+10.5V	+5V	GND	−5V
IC 1	CX194B			*	11, 29	
IC 2	BX3915A			*	2, 8	
IC 3	TC4011BF			14	7	
IC 4	TC4538BF			16	8	
IC 5	TC4011BF			14	7	
IC 6	TC4011BF			14	7	
IC 7	TC4069UBF			14	7	
IC 8	TC4050BF			1	8	
IC 9	TC4538BF			16	8	
IC 10	TC4538BF			16	8	
IC 11	TC4538BF			16	8	
IC 12	TC4069UBF			14	7	
IC 13	μPC324G2		4			11
IC 14	μPC324G2		4			11
IC 15	μPC324G2		4			11
IC 16	μPC393G2		8		4	
IC 17	TC4069UBF			14	7	
IC 18	TC4001BF			14	7	
IC 19	μPC393G2	8			4	
IC 20	μPC393G2	8			4	
IC 21	TC4030BF			14	7	
IC 22	TC4053BF			16	8	7
IC 23	TC4053BF			16	8	7
IC 24	TC4053BF			16	8	7
IC 25	TC4013BF			14	7	
IC 26	μPC393G2		8		4	
IC 27	TC4053BF		16		7, 8	
IC 28	μPC4558G2		8		4	
IC 29	TC4538BF			16	8	

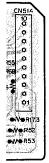
*REFER TO SCHEMATIC

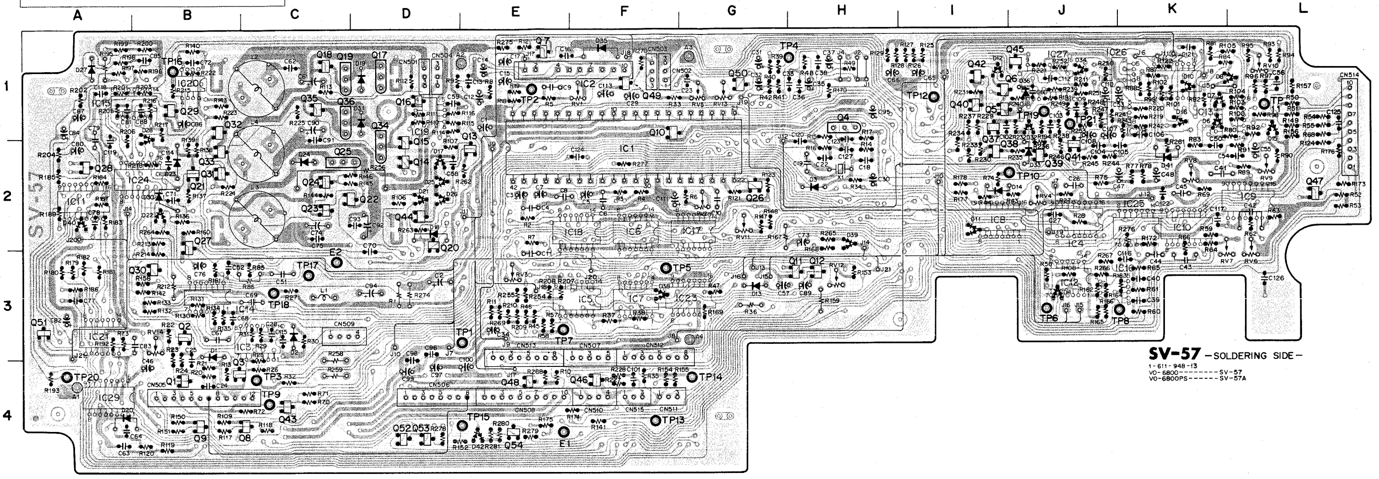
S/N 12
S/N 10



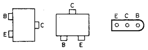
CN501	D - 1
CN502	F - 1
CN503	F - 1
CN504	D - 1
CN505	B - 4
CN506	D - 4
CN507	F - 3
CN508	E - 4
CN509	C - 3
CN510	F - 4
CN511	F - 4
CN512	F - 3
CN513	E - 3
CN514	L - 1
CN515	F - 4
D1	B - 3
D2	C - 3
D3	H - 2
D4	J - 3
D6	K - 1
D7	K - 1
D8	L - 1
D10	K - 1
D11	I - 2
D12	I - 1
D13	G - 3
D14	I - 2
D15	L - 1
D16	K - 1
D17	D - 2
D18	D - 2
D19	D - 1
D20	A - 4
D21	D - 2
D22	B - 2
D23	B - 2

S/N 12781 TO 13980 (UC)
S/N 10561 TO 10910 (J)





SV-57 -SOLDERING SIDE-
1-611-948-13
VO-6800----------SV-57
VO-6800PS-------SV-57A



CN501	D - 1
CN502	F - 1
CN503	F - 1
CN504	D - 1
CN505	B - 4
CN506	D - 4
CN507	F - 3
CN508	E - 4
CN509	C - 3
CN510	F - 4
CN511	F - 4
CN512	F - 3
CN513	E - 3
CN514	L - 1
CN515	F - 4
D1	B - 3
D2	C - 3
D3	H - 2
D4	J - 3
D6	K - 1
D7	K - 1
D8	L - 1
D10	K - 1
D11	I - 2
D12	I - 1
D13	G - 3
D14	I - 2
D15	L - 1
D16	K - 1
D17	D - 2
D18	D - 2
D19	D - 1
D20	A - 4
D21	D - 2
D22	B - 2
D23	B - 2
D24	C - 2
D25	D - 2
D26	D - 2
D27	A - 1
D28	B - 1
D30	B - 2
D31	D - 1
D32	J - 1
D33	J - 2
D34	J - 1
D35	F - 1
D36	J - 1
D38	F - 3
D39	H - 2
D40	A - 2
D41	K - 2
D42	E - 4
E1	E - 4
E2	C - 3
IC1	F - 2
IC2	E - 1
IC3	C - 3
IC4	J - 2
IC5	F - 3
IC6	F - 2
IC7	F - 3
IC8	I - 2
IC9	L - 2
IC10	K - 2
IC11	A - 2
IC12	J - 3
IC13	K - 1
IC14	B - 3
IC15	A - 1
IC16	J - 3
IC17	G - 2
IC18	F - 2
IC19	D - 1
IC20	B - 1
IC21	A - 3
IC22	K - 1
IC23	G - 3
IC24	B - 2
IC25	K - 2
IC26	K - 1
IC27	J - 1
IC28	K - 1
IC29	A - 4
Q1	B - 4
Q2	B - 3
Q3	B - 4
Q4	H - 1
Q5	I - 1
Q6	I - 1
Q7	E - 1
Q8	C - 4
Q9	B - 4
Q10	F - 1
Q11	H - 3
Q12	H - 3
Q13	E - 2
Q14	D - 2
Q15	D - 2
Q16	D - 1
Q17	D - 1
Q18	C - 1
Q19	C - 1
Q20	D - 2
Q21	B - 2
Q22	D - 2
Q23	C - 2
Q24	C - 2
Q25	C - 2
Q26	G - 2
Q27	B - 2
Q28	A - 2
Q29	B - 1
Q30	B - 3
Q31	B - 2
Q32	B - 1
Q33	B - 2
Q34	D - 2
Q35	C - 1
Q36	C - 1
Q37	I - 1
Q38	I - 2
Q39	J - 2
Q40	I - 1
Q41	J - 2
Q42	I - 1
Q43	C - 4
Q44	D - 2
Q45	J - 1
Q46	F - 4
Q47	L - 2
Q48	E - 4
Q49	F - 1
Q50	G - 1
Q51	A - 3
Q52	D - 4
Q53	D - 4
Q54	E - 4
RV1	F - 1
RV2	G - 2
RV3	E - 3
RV4	J - 2
RV5	G - 1
RV6	L - 3
RV7	K - 3
RV8	K - 2
RV9	L - 2
RV10	L - 1
RV11	G - 2
RV12	H - 3
RV13	G - 1
RV14	B - 3
TP1	E - 3
TP2	E - 1
TP3	C - 4
TP4	H - 1
TP5	F - 3
TP6	J - 3
TP7	E - 3
TP8	K - 3
TP9	C - 4
TP10	J - 2
TP11	L - 1
TP12	I - 1
TP13	F - 4
TP14	G - 4
TP15	E - 4
TP16	B - 1
TP17	C - 3
TP18	C - 3
TP19	J - 1
TP20	A - 4
TP21	J - 1
X1	H - 2

REF. NO.	NTSC	PAL/SEC
J1	SHORT	OPEN
J2	OPEN	SHORT
J4	SHORT	SHORT

Ref. No.	Type	Pin No.				
		+12V	+10.5V	+5V	GND	−5V
IC 1	CX194B			*	11, 29	
IC 2	BX3915A			*	2, 8	
IC 3	TC4011BF			14	7	
IC 4	TC4538BF			16	8	
IC 5	TC4011BF			14	7	
IC 6	TC4011BF			14	7	
IC 7	TC4069UBF			14	7	
IC 8	TC4050BF			1	8	
IC 9	TC4538BF			16	8	
IC 10	TC4538BF			16	8	
IC 11	TC4538BF			16	8	
IC 12	TC4069UBF			14	7	
IC 13	μPC324G2		4			11
IC 14	μPC324G2		4			11
IC 15	μPC324G2		4			11
IC 16	μPC393G2		8		4	
IC 17	TC4069UBF			14	7	
IC 18	TC4001BF			14	7	
IC 19	μPC393G2	8			4	
IC 20	μPC393G2	8			4	
IC 21	TC4030BF			14	7	
IC 22	TC4053BF			16	8	7
IC 23	TC4053BF			16	8	7
IC 24	TC4053BF			16	8	7
IC 25	TC4013BF			14	7	
IC 26	μPC393G2		8		4	
IC 27	TC4053BF		16		7, 8	
IC 28	μPC4558G2		8		4	
IC 29	TC4538BF			16	8	

*REFER TO SCHEMATIC

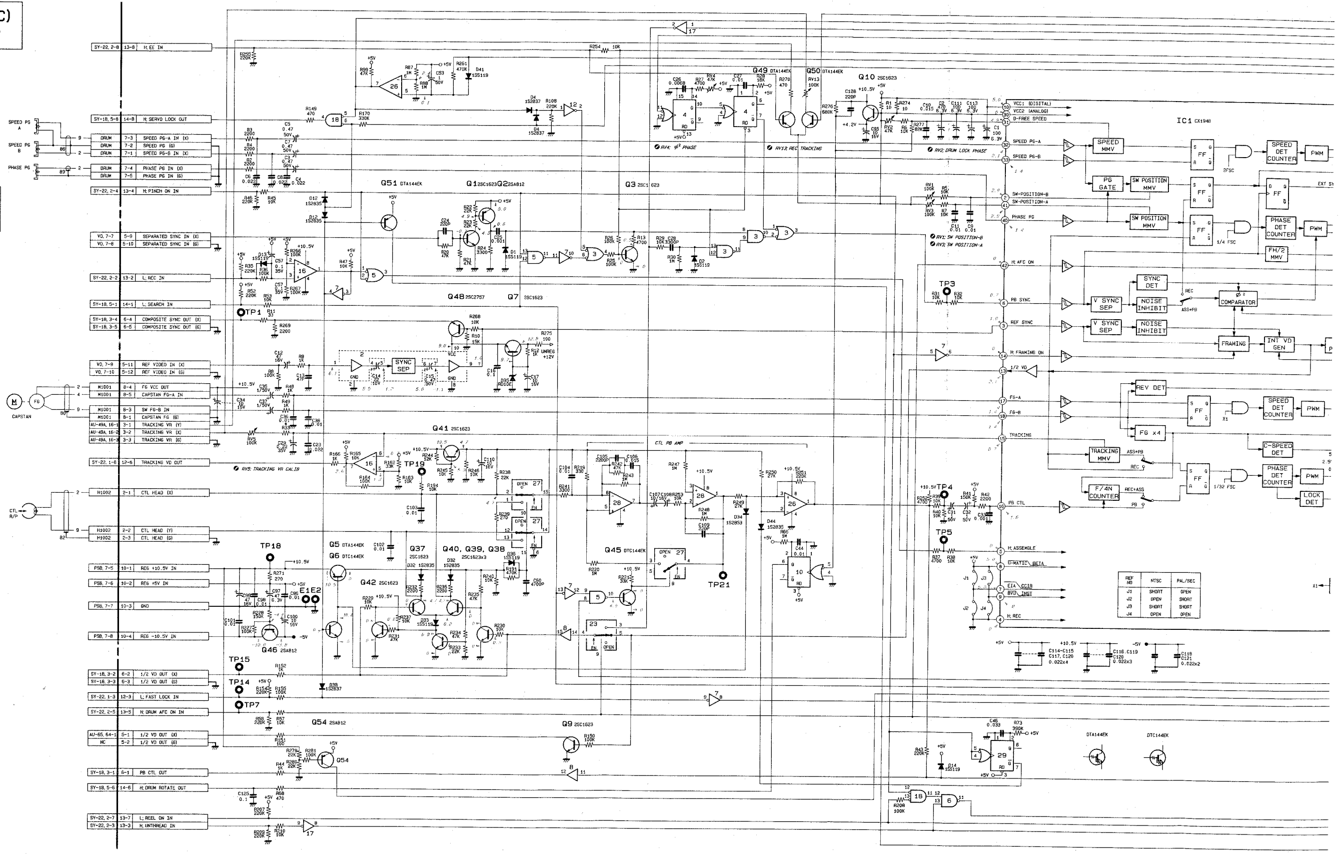
−5V
11
11
11
7
7
7
HEMATIC

S -57 (DRUM/CAPSTAN/REEL SERVO)
P -22 (REEL FG)

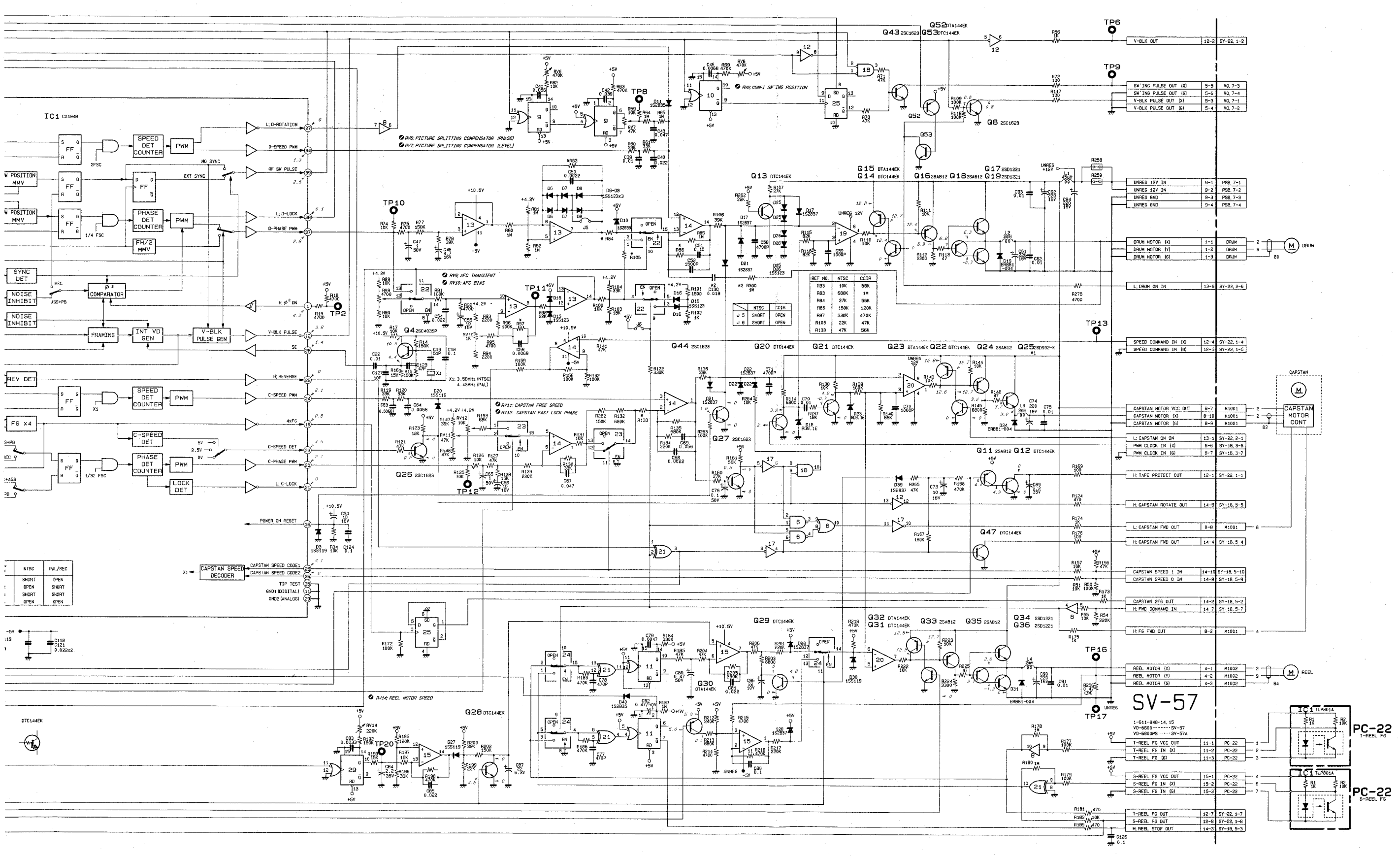
S/N 13981 AND LATER (UC)
S/N 10911 AND LATER (J)

NOTE;

MARK	CHANGE INFORMATION	SERIAL NO.
*1	Q25 2SD1160 2SD992-K	UC; 16331 AND HIGHER J ; 11561 AND HIGHER EK; 14721 AND HIGHER
*2	R300 1M ADDED C130 0.01B ADDED	UC; 17731 AND HIGHER J ; 11561 AND HIGHER EK; 15371 AND HIGHER


SY-22, 2-8 13-8 H; EE IN
SY-18, 5-8 14-8 H; SERVO LOCK OUT
SPEED PG A
SPEED PG B
PHASE PG
DRUM 7-3 SPEED PG-A IN (X)
DRUM 7-2 SPEED PG (G)
DRUM 7-1 SPEED PG-B IN (X)
DRUM 7-4 PHASE PG IN (X)
DRUM 7-5 PHASE PG IN (G)
SY-22, 2-4 13-4 H; PINCH ON IN
VO, 7-7 5-9 SEPARATED SYNC IN (X)
VO, 7-8 5-10 SEPARATED SYNC IN (G)
SY-22, 2-2 13-2 L; REC IN
SY-18, 5-1 14-1 L; SEARCH IN
SY-18, 3-4 6-4 COMPOSITE SYNC OUT (X)
SY-18, 3-5 6-5 COMPOSITE SYNC OUT (G)
VO, 7-9 5-11 REF VIDEO IN (X)
VO, 7-10 5-12 REF VIDEO IN (G)
M1001 8-4 FG VCC OUT
M1001 8-5 CAPSTAN FG-A IN
M1001 8-3 SW FG-B IN
M1001 8-1 CAPSTAN FG (G)
AU-49A, 16-1 3-1 TRACKING VR (Y)
AU-49A, 16-2 3-2 TRACKING VR (X)
AU-49A, 16-3 3-3 TRACKING VR (G)
CAPSTAN
SY-22, 1-8 12-8 TRACKING VD OUT
CTL R/P
H1002 2-1 CTL HEAD (X)
H1002 2-2 CTL HEAD (Y)
H1002 2-3 CTL HEAD (G)
PSB, 7-5 10-1 REG +10.5V IN
PSB, 7-6 10-2 REG +5V IN
PSB, 7-7 10-3 GND
PSB, 7-8 10-4 REG -10.5V IN
SY-18, 3-2 6-2 1/2 VD OUT (X)
SY-18, 3-3 6-3 1/2 VD OUT (G)
SY-22, 1-3 12-3 L; FAST LOCK IN
SY-22, 2-5 13-5 H; DRUM AFC ON IN
AU-65, 64-1 5-1 1/2 VD OUT (X)
NC 5-2 1/2 VD OUT (G)
SY-18, 3-1 6-1 PB CTL OUT
SY-18, 5-6 14-6 H; DRUM ROTATE OUT
SY-22, 2-7 13-7 L; REEL ON IN
SY-22, 2-3 13-3 H; UNTHREAD IN
TP1
TP3
TP4
TP5
TP7
TP14
TP15
TP18
TP19
TP21
E1 E2
Q1 2SC1623 Q2 2SA812
Q3 2SC1623
Q5 DTA144EK
Q6 DTC144EK
Q7 2SC1623
Q9 2SC1623
Q10 2SC1623
Q37 2SC1623
Q40, Q39, Q38 2SC1623x3
Q41 2SC1623
Q42 2SC1623
Q45 DTC144EK
Q46 2SA812
Q48 2SC2757
Q49 DTA144EK
Q50 DTA144EK
Q51 DTA144EK
Q54 2SA812
SYNC SEP
CTL PB AMP
RV1; SW POSITION-B
RV2; DRUM LOCK PHASE
RV3; SW POSITION-A
RV4; φ2 PHASE
RV5; TRACKING VR CALIB
RV13; REC TRACKING
IC1 CX1948
VCC1 (DIGITAL)
VCC2 (ANALOG)
D-FREE SPEED
SPEED PG-A
SPEED PG-B
SW-POSITION-B
SW-POSITION-A
PHASE PG
H; AFC ON
PB SYNC
REF SYNC
H; FRAMING ON
1/2 VD
FG-A
FG-B
TRACKING
PB CTL
H; ASSEMBLE
U-MATIC BETA
EIA CCIR
8VD INST
H; REC
SPEED MMV
PG GATE
SW POSITION MMV
SW POSITION MMV
FF
SPEED DET COUNTER
PWM
PHASE DET COUNTER
FH/2 MMV
2FSC
1/4 FSC
EXT SY
SYNC DET
V SYNC SEP
NOISE INHIBIT
φ2 COMPARATOR
FRAMING
INT VD GEN
REV DET
FG x4
TRACKING MMV
C-SPEED DET
F/4N COUNTER
LOCK DET
ASS+PB
REC+ASS
1/32 FSC
X1
C114-C115 C117, C120 0.022x4
C116, C119 C120 0.022x3
C118 C121 0.022x2
DTA144EK
DTC144EK

REF NO	NTSC	PAL/SEC
J1	SHORT	OPEN
J2	OPEN	SHORT
J3	SHORT	SHORT
J4	OPEN	OPEN

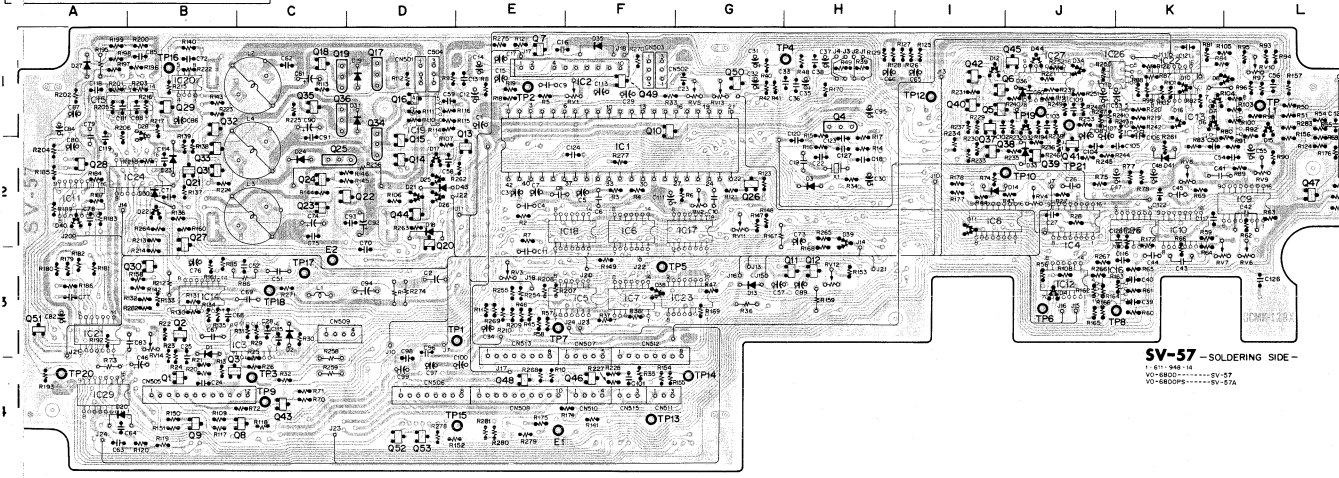

IC1 CX194B
SPEED DET COUNTER
PWM
PHASE DET COUNTER
FH/2 MMV
SYNC DET
NOISE INHIBIT
COMPARATOR
FRAMING
INT VD GEN
V-BLK PULSE GEN
REV DET
FG x4
C-SPEED DET
LOCK DET
CAPSTAN SPEED DECODER
L: D-ROTATION
D-SPEED PWM
RF SW PULSE
L: D-LOCK
D-PHASE PWM
H: φ² ON
V-BLK PULSE
H: REVERSE
C-SPEED PWM
4xFG
C-SPEED DET
C-PHASE PWM
L: C-LOCK
POWER ON RESET
CAPSTAN SPEED CODE1
CAPSTAN SPEED CODE2
TIP TEST
GND1 (DIGITAL)
GND2 (ANALOG)
NO SYNC
EXT SYNC
TP2
TP6
TP8
TP9
TP10
TP11
TP12
TP13
TP16
TP17
TP20
RV6: PICTURE SPLITTING COMPENSATOR (PHASE)
RV7: PICTURE SPLITTING COMPENSATOR (LEVEL)
RV8: CONFI SW'ING POSITION
RV9: AFC TRANSIENT
RV10: AFC BIAS
RV11: CAPSTAN FREE SPEED
RV12: CAPSTAN FAST LOCK PHASE
RV14: REEL MOTOR SPEED
X1: 3.58MHz (NTSC) 4.43MHz (PAL)
Q4 2SC4035P
Q8 2SC1623
Q11 2SAB12
Q12 DTC144EK
Q13 DTC144EK
Q14 DTC144EK
Q15 DTA144EK
Q16 2SAB12
Q17 2SD1221
Q18 2SAB12
Q19 2SD1221
Q20 DTC144EK
Q21 DTC144EK
Q22 DTC144EK
Q23 DTA144EK
Q24 2SAB12
Q25 2SD992-K
Q26 2SC1623
Q27 2SC1623
Q28 DTC144EK
Q29 DTC144EK
Q30 DTA144EK
Q31 DTC144EK
Q32 DTA144EK
Q33 2SAB12
Q34 2SD1221
Q35 2SAB12
Q36 2SD1221
Q43 2SC1623
Q44 2SC1623
Q47 DTC144EK
Q52 DTA144EK
Q53 DTC144EK
V-BLK OUT
SW'ING PULSE OUT (X)
SW'ING PULSE OUT (G)
V-BLK PULSE OUT (X)
V-BLK PULSE OUT (G)
UNREG 12V IN
UNREG GND
DRUM MOTOR (X)
DRUM MOTOR (Y)
DRUM MOTOR (G)
L: DRUM ON IN
SPEED COMMAND IN (X)
SPEED COMMAND IN (G)
CAPSTAN MOTOR VCC OUT
CAPSTAN MOTOR (X)
CAPSTAN MOTOR (G)
L: CAPSTAN ON IN
PWM CLOCK IN (X)
PWM CLOCK IN (G)
H: TAPE PROTECT OUT
H: CAPSTAN ROTATE OUT
L: CAPSTAN FWD OUT
H: CAPSTAN FWD OUT
CAPSTAN SPEED 1 IN
CAPSTAN SPEED 0 IN
CAPSTAN 2FG OUT
H: FWD COMMAND IN
H: FG FWD OUT
REEL MOTOR (X)
REEL MOTOR (Y)
REEL MOTOR (G)
T-REEL FG VCC OUT
T-REEL FG IN (X)
T-REEL FG (G)
S-REEL FG VCC OUT
S-REEL FG IN (X)
S-REEL FG IN (G)
T-REEL FG OUT
S-REEL FG OUT
H: REEL STOP OUT
DRUM
CAPSTAN
CAPSTAN MOTOR CONT
REEL
M1001
M1002
PC-22
T-REEL FG
S-REEL FG
IC1 TLP801A
SV-57
1-611-948-14, 15
VO-6800 ------- SV-57
VO-6800PS ----- SV-57A

REF NO.	NTSC	CCIR
R33	10K	56K
R83	680K	1M
R84	27K	56K
R86	150K	120K
R97	330K	470K
R105	22K	47K
R133	47K	56K

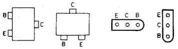
	NTSC	CCIR
J5	SHORT	OPEN
J6	SHORT	OPEN

S -57 (DRUM/CAPSTAN/REEL SERVO)

S/N 13981 TO 16680 (UC)
S/N 10911 TO 11560 (J)


A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
IC1
IC2
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC23
IC24
IC26
IC27
IC29
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
E1
E2
CN501
CN502
CN503
CN504
CN505
CN506
CN507
CN508
CN509
CN510
CN511
CN512
CN513
CN514
CN515
X1

SV-57 -SOLDERING SIDE-
1-611-948-14
VO-6800--------SV-57
VO-6800PS------SV-57A


B
C
E
C
B
E
E C B
E
C
B

CN501	D - 1
CN502	F - 1
CN503	F - 1
CN504	D - 1
CN505	B - 4
CN506	D - 4
CN507	F - 3
CN508	E - 4
CN509	C - 3
CN510	F - 4
CN511	F - 4
CN512	F - 3
CN513	E - 3
CN514	L - 1
CN515	F - 4
D1	B - 3
D2	C - 3
D3	H - 2
D4	J - 3
D6	K - 1
D7	K - 1
D8	L - 1
D10	K - 1
D11	I - 2
D12	I - 1
D13	G - 3
D14	I - 2
D15	L - 1
D16	K - 1
D17	D - 2
D18	D - 2
D19	D - 1
D20	A - 4
D21	D - 2
D22	B - 2
D23	B - 2
D24	C - 2
D25	D - 2
D26	D - 2
D27	A - 1
D28	B - 1
D30	B - 2
D31	D - 1
D32	J - 1
D33	J - 2
D34	J - 1
D35	F - 1
D36	J - 1
D38	F - 3
D39	H - 2
D40	A - 2
D41	K - 2
D43	D - 2
D44	J - 1
E1	E - 4
E2	C - 3
IC1	F - 2
IC2	E - 1
IC3	C - 3
IC4	J - 2
IC5	F - 3
IC6	F - 2
IC7	F - 3
IC8	I - 2
IC9	L - 2
IC10	K - 2
IC11	A - 2
IC12	J - 3
IC13	K - 1
IC14	B - 3
IC15	A - 1
IC16	J - 3
IC17	G - 2
IC18	F - 2
IC19	D - 1
IC20	B - 1
IC21	A - 3
IC22	K - 1
IC23	G - 3
IC24	B - 2
IC25	K - 2
IC26	K - 1
IC27	J - 1
IC28	K - 1
IC29	A - 4
Q1	B - 4
Q2	B - 3
Q3	B - 4
Q4	H - 1
Q5	I - 1
Q6	I - 1
Q7	E - 1
Q8	C - 4
Q9	B - 4
Q10	F - 1
Q11	H - 3
Q12	H - 3
Q13	E - 2
Q14	D - 2
Q15	D - 2
Q16	D - 1
Q17	D - 1
Q18	C - 1
Q19	C - 1
Q20	D - 2
Q21	B - 2
Q22	D - 2
Q23	C - 2
Q24	C - 2
Q25	C - 2
Q26	G - 2
Q27	B - 2
Q28	A - 2
Q29	B - 1
Q30	B - 3
Q31	B - 2
Q32	B - 1
Q33	B - 2
Q34	D - 2
Q35	C - 1
Q36	C - 1
Q37	I - 1
Q38	I - 2
Q39	J - 2
Q40	I - 1
Q41	J - 2
Q42	I - 1
Q43	C - 4
Q44	D - 2
Q45	J - 1
Q46	F - 4
Q47	L - 2
Q48	E - 4
Q49	F - 1
Q50	G - 1
Q51	A - 3
Q52	D - 4
Q53	D - 4
RV1	F - 1
RV2	G - 2
RV3	E - 3
RV4	J - 2
RV5	G - 1
RV6	L - 3
RV7	K - 3
RV8	K - 2
RV9	L - 2
RV10	L - 1
RV11	G - 2
RV12	H - 3
RV13	G - 1
RV14	B - 3
TP1	E - 3
TP2	E - 1
TP3	C - 4
TP4	H - 1
TP5	F - 3
TP6	J - 3
TP7	E - 3
TP8	K - 3
TP9	C - 4
TP10	J - 2
TP11	L - 1
TP12	I - 1
TP13	F - 4
TP14	G - 4
TP15	E - 4
TP16	B - 1
TP17	C - 3
TP18	C - 3
TP19	J - 1
TP20	A - 4
TP21	J - 1
X1	H - 2

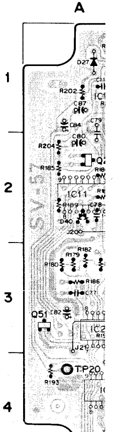
REF. NO.	NTSC	PAL/SEC
J1	SHORT	OPEN
J2	OPEN	SHORT
J3	SHORT	SHORT
J4	OPEN	OPEN

Ref. No.	Type	Pin No.				
		+12V	+10.5V	+5V	GND	−5V
IC 1	CX194B			*	11, 29	
IC 2	BX3915A			*	2, 8	
IC 3	TC4011BF			14	7	
IC 4	TC4538BF			16	8	
IC 5	TC4011BF			14	7	
IC 6	TC4011BF			14	7	
IC 7	TC4069UBF			14	7	
IC 8	TC4050BF			1	8	
IC 9	TC4538BF			16	8	
IC 10	TC4538BF			16	8	
IC 11	TC4538BF			16	8	
IC 12	TC4069UBF			14	7	
IC 13	μPC324G2		4			11
IC 14	μPC324G2		4			11
IC 15	μPC324G2		4			11
IC 16	μPC393G2		8		4	
IC 17	TC4069UBF			14	7	
IC 18	TC4001BF			14	7	
IC 19	μPC393G2	8			4	
IC 20	μPC393G2	8			4	
IC 21	TC4030BF			14	7	
IC 22	TC4053BF			16	8	7
IC 23	TC4053BF			16	8	7
IC 24	TC4053BF			16	8	7
IC 25	TC4013BF			14	7	
IC 26	μPC393G2		8		4	
IC 27	TC4053BF		16		7, 8	
IC 28	μPC4558G2		8		4	
IC 29	TC4538BF			16	8	

*REFER TO SCHEMATIC

SV-57 (DRU

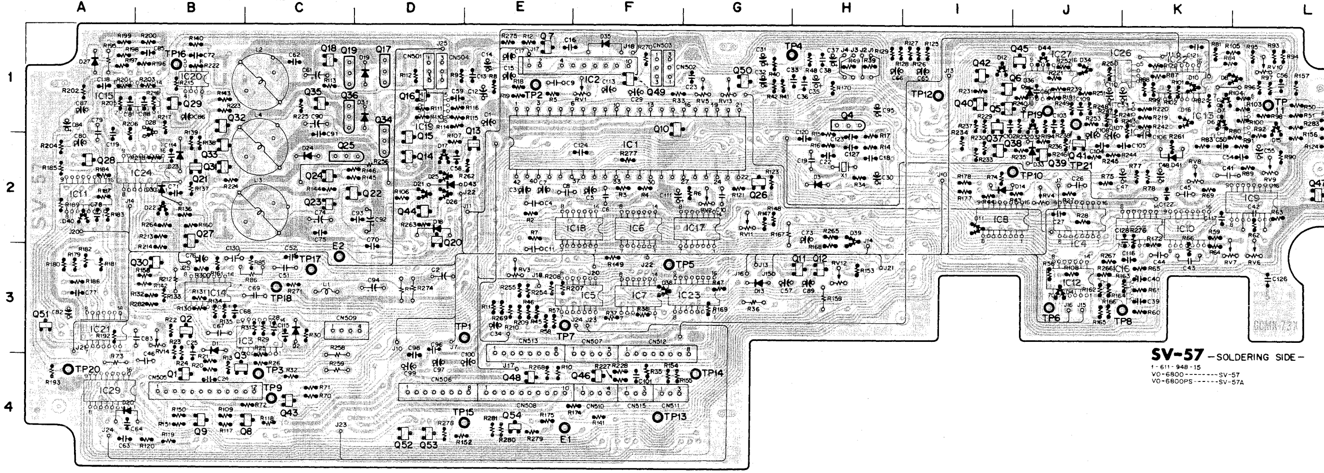
S/N 177
S/N 115

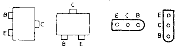


CN501	D - 1
CN502	F - 1
CN503	F - 1
CN504	D - 1
CN505	B - 4
CN506	D - 4
CN507	F - 3
CN508	E - 4
CN509	C - 3
CN510	F - 4
CN511	F - 4
CN512	F - 3
CN513	E - 3
CN514	L - 1
CN515	F - 4
D1	B - 3
D2	C - 3
D3	H - 2
D4	J - 3
D6	K - 1
D7	K - 1
D8	L - 1
D10	K - 1
D11	I - 2
D12	I - 1
D13	G - 3
D14	I - 2
D15	L - 1
D16	K - 1
D17	D - 2
D18	D - 2
D19	D - 1
D20	A - 4
D21	D - 2
D22	B - 2
D23	B - 2

SV-57 (DRUM/CAPSTAN/REEL SERVO)

S/N 17731 AND LATER (UC)
S/N 11561 AND LATER (J)





CN501	D - 1
CN502	F - 1
CN503	F - 1
CN504	D - 1
CN505	B - 4
CN506	D - 4
CN507	F - 3
CN508	E - 4
CN509	C - 3
CN510	F - 4
CN511	F - 4
CN512	F - 3
CN513	E - 3
CN514	L - 1
CN515	F - 4
D1	B - 3
D2	C - 3
D3	H - 2
D4	J - 3
D6	K - 1
D7	K - 1
D8	L - 1
D10	K - 1
D11	I - 2
D12	I - 1
D13	G - 3
D14	I - 2
D15	L - 1
D16	K - 1
D17	D - 2
D18	D - 2
D19	D - 1
D20	A - 4
D21	D - 2
D22	B - 2
D23	B - 2
D24	C - 2
D25	D - 2
D26	D - 2
D27	A - 1
D28	B - 1
D30	B - 2
D31	D - 1
D32	J - 1
D33	J - 2
D34	J - 1
D35	F - 1
D36	J - 1
D38	F - 3
D39	H - 2
D40	A - 2
D41	K - 2
D43	D - 2
D44	J - 1
E1	E - 4
E2	C - 3
IC1	F - 2
IC2	E - 1
IC3	C - 3
IC4	J - 2
IC5	F - 3
IC6	F - 2
IC7	F - 3
IC8	I - 2
IC9	L - 2
IC10	K - 2
IC11	A - 2
IC12	J - 3
IC13	K - 1
IC14	B - 3
IC15	A - 1
IC16	J - 3
IC17	G - 2
IC18	F - 2
IC19	D - 1
IC20	B - 1
IC21	A - 3
IC22	K - 1
IC23	G - 3
IC24	B - 2
IC25	K - 2
IC26	K - 1
IC27	J - 1
IC28	K - 1
IC29	A - 4
Q1	B - 4
Q2	B - 3
Q3	B - 4
Q4	H - 1
Q5	I - 1
Q6	I - 1
Q7	E - 1
Q8	C - 4
Q9	B - 4
Q10	F - 1
Q11	H - 3
Q12	H - 3
Q13	E - 2
Q14	D - 2
Q15	D - 2
Q16	D - 1
Q17	D - 1
Q18	C - 1
Q19	C - 1
Q20	D - 2
Q21	B - 2
Q22	D - 2
Q23	C - 2
Q24	C - 2
Q25	C - 2
Q26	G - 2
Q27	B - 2
Q28	A - 2
Q29	B - 1
Q30	B - 3
Q31	B - 2
Q32	B - 1
Q33	B - 2
Q34	D - 2
Q35	C - 1
Q36	C - 1
Q37	I - 1
Q38	I - 2
Q39	J - 2
Q40	I - 1
Q41	J - 2
Q42	I - 1
Q43	C - 4
Q44	D - 2
Q45	J - 1
Q46	F - 4
Q47	L - 2
Q48	E - 4
Q49	F - 1
Q50	G - 1
Q51	A - 3
Q52	D - 4
Q53	D - 4
Q54	E - 4
RV1	F - 1
RV2	G - 2
RV3	E - 3
RV4	J - 2
RV5	G - 1
RV6	L - 3
RV7	K - 3
RV8	K - 2
RV9	L - 2
RV10	L - 1
RV11	G - 2
RV12	H - 3
RV13	G - 1
RV14	B - 3
TP1	E - 3
TP2	E - 1
TP3	C - 4
TP4	H - 1
TP5	F - 3
TP6	J - 3
TP7	E - 3
TP8	K - 3
TP9	C - 4
TP10	J - 2
TP11	L - 1
TP12	I - 1
TP13	F - 4
TP14	G - 4
TP15	E - 4
TP16	B - 1
TP17	C - 3
TP18	C - 3
TP19	J - 1
TP20	A - 4
TP21	J - 1
X1	H - 2

REF. NO.	NTSC	PAL/SEC
J1	SHORT	OPEN
J2	OPEN	SHORT
J3	SHORT	SHORT
J4	OPEN	OPEN

Ref. No.	Type	Pin No.				
		+12V	+10.5V	+5V	GND	−5V
IC 1	CX194B			*	11, 29	
IC 2	BX3915A			*	2, 8	
IC 3	TC4011BF			14	7	
IC 4	TC4538BF			16	8	
IC 5	TC4011BF			14	7	
IC 6	TC4011BF			14	7	
IC 7	TC4069UBF			14	7	
IC 8	TC4050BF			1	8	
IC 9	TC4538BF			16	8	
IC 10	TC4538BF			16	8	
IC 11	TC4538BF			16	8	
IC 12	TC4069UBF			14	7	
IC 13	μPC324G2		4			11
IC 14	μPC324G2		4			11
IC 15	μPC324G2		4			11
IC 16	μPC393G2		8		4	
IC 17	TC4069UBF			14	7	
IC 18	TC4001BF			14	7	
IC 19	μPC393G2	8			4	
IC 20	μPC393G2	8			4	
IC 21	TC4030BF			14	7	
IC 22	TC4053BF			16	8	7
IC 23	TC4053BF			16	8	7
IC 24	TC4053BF			16	8	7
IC 25	TC4013BF			14	7	
IC 26	μPC393G2		8		4	
IC 27	TC4053BF		16		7, 8	
IC 28	μPC4558G2		8		4	
IC 29	TC4538BF			16	8	

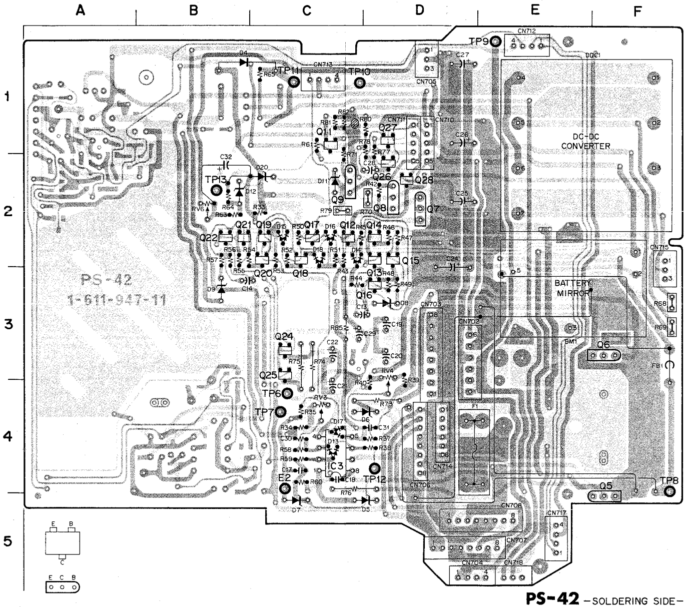
*REFER TO SCHEMATIC

P -42 (POWER SUPPLY)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)

S/N
S/N

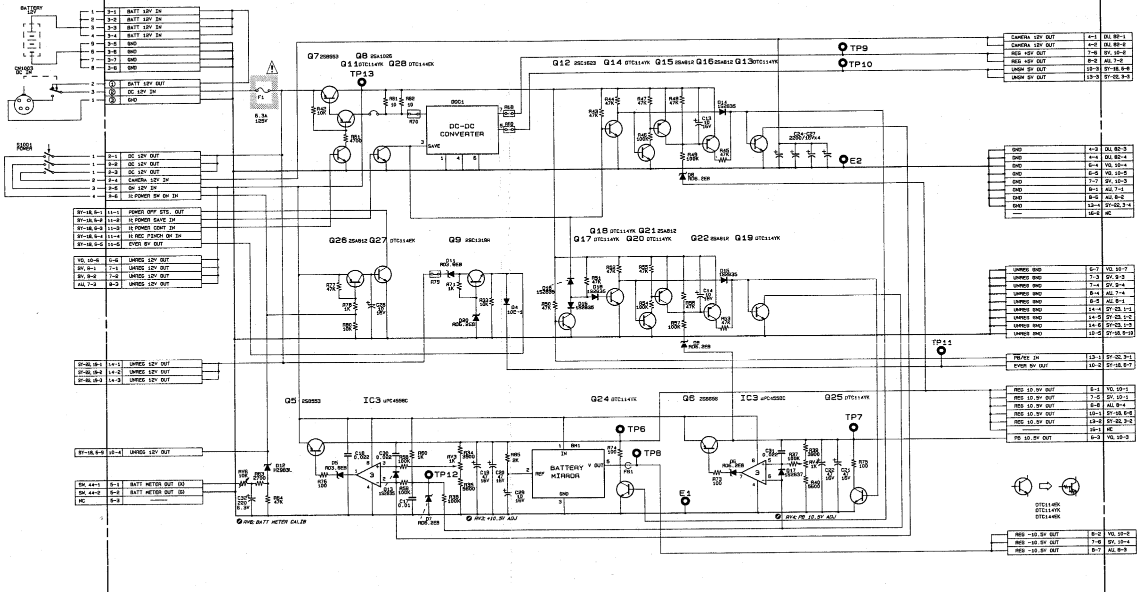
CN702	D - 3
CN703	D - 3
CN704	D - 5
CN705	D - 1
CN706	D - 4
CN707	D - 5
CN708	E - 5
CN710	D - 1
CN711	D - 1
CN712	E - 1
CN713	C - 1
CN714	D - 4
CN715	F - 3
CN717	E - 5
CN718	E - 5
D4	B - 1
D5	D - 5
D6	D - 4
D7	C - 5
D8	D - 3
D9	B - 3
D11	C - 2
D12	B - 2
D13	C - 4
D14	C - 2
D15	C - 2
D16	C - 2
D17	C - 4
D18	C - 2
D20	C - 2
E1	B - 4
E2	C - 4
F1	D - 4
IC3	C - 4
Q5	F - 4
Q6	F - 3
Q7	D - 2
Q8	D - 2
Q9	D - 2
Q11	C - 1
Q12	C - 2
Q13	D - 2
Q14	D - 2
Q15	D - 2
Q16	D - 3
Q17	C - 2
Q18	C - 2
Q19	C - 2
Q20	C - 2
Q21	B - 2
Q22	B - 2
Q24	C - 3
Q25	C - 3
Q26	D - 2
Q27	D - 1
Q28	D - 2
RV3	C - 4
RV4	D - 3
RV6	B - 2
TP6	C - 4
TP7	C - 4
TP8	F - 8
TP9	E - 1
TP10	C - 1
TP11	C - 1
TP12	D - 4
TP13	B - 2


A
B
C
D
E
F
1
2
3
4
5
PS-42
1-611-947-11
DC-DC CONVERTER
BATTERY MIRROR
DDC1
BM1
FB1
F1
IC3
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
E2
Q5
Q6
Q7
Q8
Q9
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q24
Q25
Q26
Q27
Q28
CN702
CN703
CN704
CN705
CN706
CN707
CN708
CN710
CN711
CN712
CN713
CN714
CN715
CN717
CN718
E B
C
E C B

PS-42 -SOLDERING SIDE-
1-611-947-11
VO-6800

NOTE: Th
saf
Re

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


BATTERY 12V
CN1003 DC IN
S1001 POWER
BATT 12V IN
GND
BATT 12V OUT
DC 12V IN
DC 12V OUT
CAMERA 12V IN
ON 12V IN
H: POWER SW ON IN
POWER OFF STS. OUT
H: POWER SAVE IN
H: POWER CONT IN
H: REC PINCH ON IN
EVER 6V OUT
UNREG 12V OUT
BATT METER OUT (X)
BATT METER OUT (S)
F1
6.3A 125V
Q7 2SB553
Q8 2SA1026
Q11 DTC114YK
Q28 DTC144EK
TP13
DDC1
DC-DC CONVERTER
SAVE
Q12 2SC1623
Q14 DTC114YK
Q15 2SA812
Q16 2SA812
Q13 DTC114YK
TP9
TP10
C24-C27 2200/16Vx4
E2
Q26 2SA812
Q27 DTC114EK
Q9 2SC1318R
Q18 DTC114YK
Q21 2SA812
Q17 DTC114YK
Q20 DTC114YK
Q22 2SA812
Q19 DTC114YK
TP11
Q5 2SB553
IC3 uPC4558C
Q24 DTC114YK
Q6 2SB556
Q25 DTC114YK
TP6
TP7
TP8
TP12
E1
BATTERY MIRROR
RV6: BATT METER CALIB
RV3: +10.5V ADJ
RV4: PB 10.5V ADJ
CAMERA 12V OUT
REG +5V OUT
UNSW 5V OUT
UNREG GND
PB/EE IN
EVER 5V OUT
REG 10.5V OUT
PB 10.5V OUT
REG -10.5V OUT
DTC114EK
DTC114YK
DTC144EK

PS-42
1-611-847-11
VD-6800

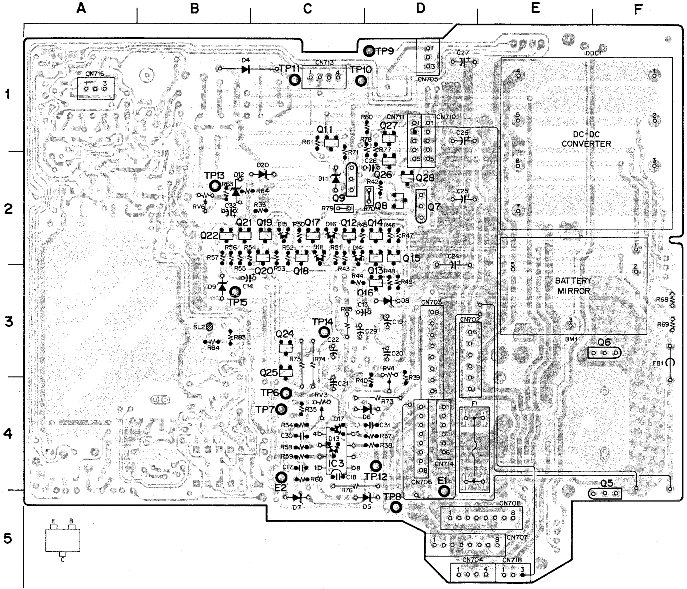
NOTE: The shaded and ⚠ -marked components are critical to safety.
Replace only with same components as specified.

PS-42 (POWER SUPPLY)
TM-19 (HOURS METER)

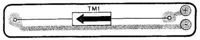
S/N 10031 TO 10630 (UC)
S/N 10011 TO 10260 (J)

CN702	D - 3	RV3	C - 4
CN703	D - 3	RV4	D - 3
CN704	D - 5	RV6	B - 2
CN705	D - 1		
CN706	D - 4	TP6	C - 4
CN707	D - 5	TP7	C - 4
CN708	E - 5	TP8	D - 5
CN710	D - 1	TP9	D - 1
CN711	D - 1	TP10	C - 1
CN713	C - 1	TP11	C - 1
CN714	D - 4	TP12	D - 4
CN716	A - 1	TP13	B - 2
CN718	E - 5	TP14	C - 3
		TP15	B - 3
D4	B - 1		
D5	D - 5		
D6	D - 4		
D7	C - 5		
D8	D - 3		
D9	B - 3		
D11	C - 2		
D12	B - 2		
D13	C - 4		
D14	C - 2		
D15	C - 2		
D16	C - 2		
D17	C - 4		
D18	C - 2		
D20	C - 2		
E1	D - 4		
E2	C - 4		
F1	D - 4		
IC3	C - 4		
Q5	F - 4		
Q6	F - 3		
Q7	D - 2		
Q8	D - 2		
Q9	C - 2		
Q11	C - 1		
Q12	C - 2		
Q13	D - 2		
Q14	D - 2		
Q15	D - 2		
Q16	D - 3		
Q17	C - 2		
Q18	C - 2		
Q19	C - 2		
Q20	C - 2		
Q21	B - 2		
Q22	B - 2		
Q24	C - 3		
Q25	C - 3		
Q26	D - 2		
Q27	D - 1		
Q28	D - 2		

E
B
C

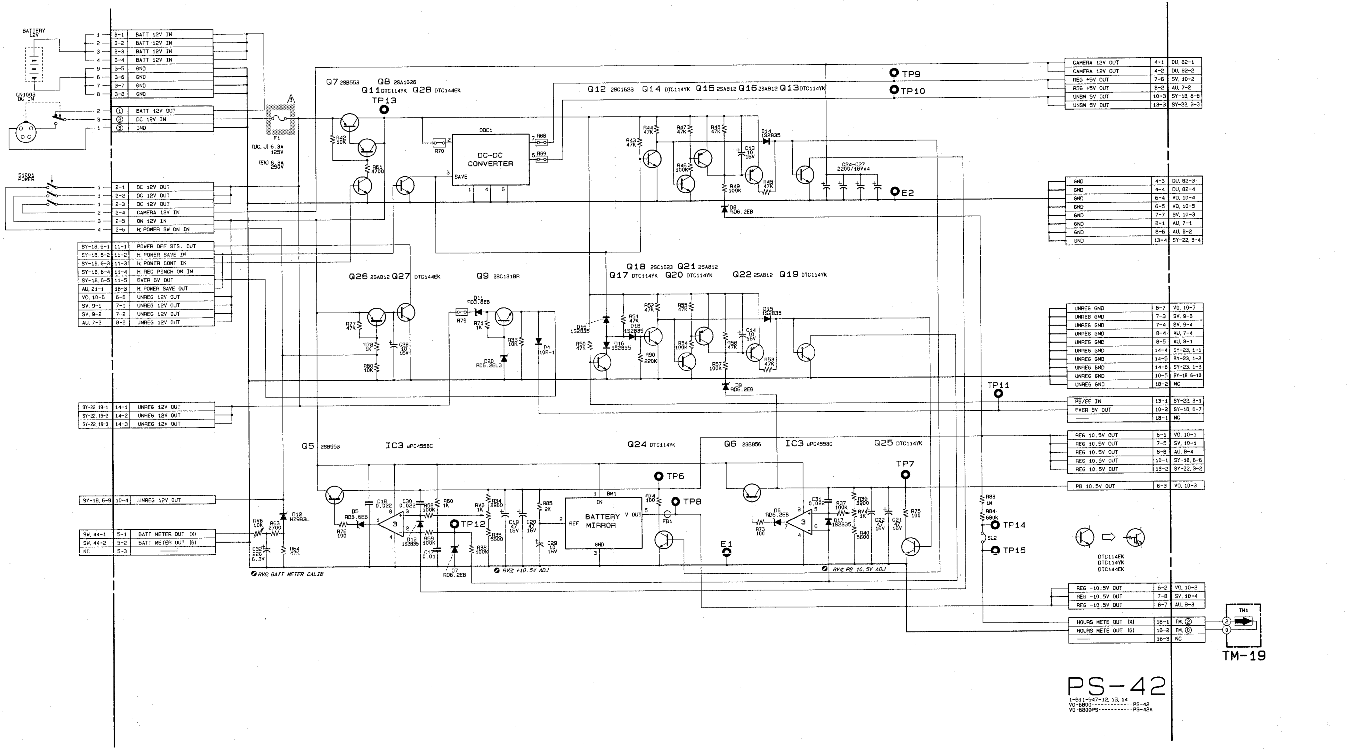

A
B
C
D
E
F
1
2
3
4
5
TP9
CN713
TP11
TP10
D4
CN716
CN705
C27
CN710
CN711
DDC1
DC-DC
CONVERTER
BATTERY
MIRROR
BM1
C26
C25
C24
Q11
Q27
R80
R61
R71
R78
R77
C28
Q26
Q28
R42
Q9
Q8
Q7
R79
R70
D11
D20
TP13
D12
R63
R64
RV6
C32
R33
Q21
Q19
D15
R50
Q17
D16
Q12
R45
Q14
R46
R47
Q22
R56
R54
R52
D18
R51
D14
Q15
R57
R55
Q20
R53
Q18
R43
Q13
R48
R44
R49
D9
C14
TP15
Q16
D8
R85
C13
C19
CN703
CN702
TP14
SL2
R83
R84
Q24
C22
C29
C20
R75
R74
Q25
C21
RV4
R40
R39
TP6
RV3
R73
TP7
R35
D6
D17
R34
C30
C31
R37
R58
D13
R38
R59
C17
IC3
R60
C18
TP12
E2
R76
D7
D5
TP8
CN706
E1
CN714
F1
Q6
R68
R69
FB1
Q5
CN708
CN707
CN704
CN718

PS-42 -SOLDERING SIDE-
1-611-947-12
VO-6800



TM-19 -SOLDERING SIDE-
1-613-881-11
VO-6800
VO-6800PS

S/N 10031 TO 13480 (UC)
S/N 10011 TO 10660 (J)


BATTERY 12V
CN1003 DC IN
S1001 POWER
3-1 BATT 12V IN
3-2 BATT 12V IN
3-3 BATT 12V IN
3-4 BATT 12V IN
3-5 GND
3-6 GND
3-7 GND
3-8 GND
① BATT 12V OUT
② DC 12V IN
③ GND
2-1 DC 12V OUT
2-2 DC 12V OUT
2-3 DC 12V OUT
2-4 CAMERA 12V IN
2-5 ON 12V IN
2-6 H: POWER SW ON IN
SY-18, 6-1 11-1 POWER OFF STS. OUT
SY-18, 6-2 11-2 H: POWER SAVE IN
SY-18, 6-3 11-3 H: POWER CONT IN
SY-18, 6-4 11-4 H: REC PINCH ON IN
SY-18, 6-5 11-5 EVER 6V OUT
AU, 21-1 18-3 H: POWER SAVE OUT
VO, 10-6 6-6 UNREG 12V OUT
SV, 9-1 7-1 UNREG 12V OUT
SV, 9-2 7-2 UNREG 12V OUT
AU, 7-3 8-3 UNREG 12V OUT
SY-22, 19-1 14-1 UNREG 12V OUT
SY-22, 19-2 14-2 UNREG 12V OUT
SY-22, 19-3 14-3 UNREG 12V OUT
SY-18, 6-9 10-4 UNREG 12V OUT
SW, 44-1 5-1 BATT METER OUT (X)
SW, 44-2 5-2 BATT METER OUT (G)
NC 5-3
F1 (UC, J) 6.3A 125V (EK) 6.3A 250V
Q7 2SB553
Q8 2SA1026
Q11 DTC114YK
Q28 DTC144EK
TP13
DDC1
DC-DC CONVERTER
SAVE
R68
R69
R70
Q12 2SC1623
Q14 DTC114YK
Q15 2SA812
Q16 2SA812
Q13 DTC114YK
TP9
TP10
E2
C24-C27 2200/16Vx4
D14 1S2835
D8 RD6.2EB
Q26 2SA812
Q27 DTC144EK
Q9 2SC1318R
D11 RD3.6EB
D20 RD6.2EL3
D4 10E-1
Q18 2SC1623
Q21 2SA812
Q17 DTC114YK
Q20 DTC114YK
Q22 2SA812
Q19 DTC114YK
D15 1S2835
D9 RD6.2EB
TP11
Q5 2SB553
IC3 uPC4558C
Q24 DTC114YK
Q6 2SB856
IC3 uPC4558C
Q25 DTC114YK
TP6
TP7
TP8
TP12
TP14
TP15
E1
BM1
BATTERY MIRROR
IN
V OUT
REF
GND
FB1
D12 HZ9B3L
D5 RD3.6EB
D13 1S2835
D7 RD6.2EB
D6 RD6.2EB
D17 1S2835
RV6: BATT METER CALIB
RV3: +10.5V ADJ
RV4: PB 10.5V ADJ
SL2
CAMERA 12V OUT 4-1 DU, B2-1
CAMERA 12V OUT 4-2 DU, B2-2
REG +5V OUT 7-6 SV, 10-2
REG +5V OUT 8-2 AU, 7-2
UNSW 5V OUT 10-3 SY-18, 6-8
UNSW 5V OUT 13-3 SY-22, 3-3
GND 4-3 DU, B2-3
GND 4-4 DU, B2-4
GND 6-4 VO, 10-4
GND 6-5 VO, 10-5
GND 7-7 SV, 10-3
GND 8-1 AU, 7-1
GND 8-6 AU, 8-2
GND 13-4 SY-22, 3-4
UNREG GND 6-7 VO, 10-7
UNREG GND 7-3 SV, 9-3
UNREG GND 7-4 SV, 9-4
UNREG GND 8-4 AU, 7-4
UNREG GND 8-5 AU, 8-1
UNREG GND 14-4 SY-23, 1-1
UNREG GND 14-5 SY-23, 1-2
UNREG GND 14-6 SY-23, 1-3
UNREG GND 10-5 SY-18, 6-10
UNREG GND 18-2 NC
PB/EE IN 13-1 SY-22, 3-1
EVER 5V OUT 10-2 SY-18, 6-7
18-1 NC
REG 10.5V OUT 6-1 VO, 10-1
REG 10.5V OUT 7-5 SV, 10-1
REG 10.5V OUT 8-8 AU, 8-4
REG 10.5V OUT 10-1 SY-18, 6-6
REG 10.5V OUT 13-2 SY-22, 3-2
PB 10.5V OUT 6-3 VO, 10-3
REG -10.5V OUT 6-2 VO, 10-2
REG -10.5V OUT 7-8 SV, 10-4
REG -10.5V OUT 8-7 AU, 8-3
HOURS METE OUT (X) 16-1 TM, ②
HOURS METE OUT (G) 16-2 TM, ⓪
16-3 NC
DTC114EK
DTC114YK
DTC144EK
TM1
TM-19
PS-42
1-611-947-12, 13, 14
VO-6800 PS-42
VO-6800PS PS-42A

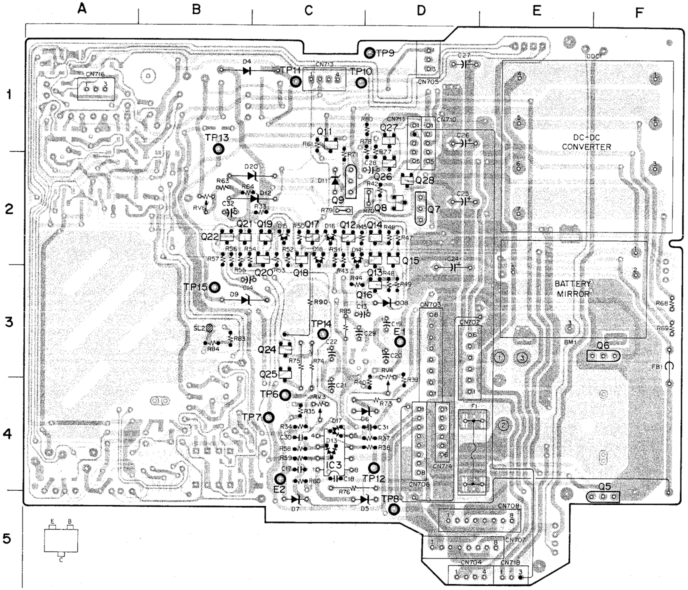
NOTE: The shaded and ⚠ -marked components are critical to safety.
Replace only with same components as specified.

F -42 (POWER SUPPLY)
T -19 (HOURS METER)

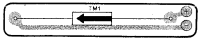
S/N 10631 TO 13480 (UC)
S/N 10261 TO 10660 (J)

S/N
S/N

CN702	D - 3
CN703	D - 3
CN704	D - 5
CN705	D - 1
CN706	D - 4
CN707	D - 5
CN708	E - 5
CN710	D - 1
CN711	D - 1
CN713	C - 1
CN714	D - 4
CN716	A - 1
CN718	E - 5
D4	B - 1
D5	D - 5
D6	D - 4
D7	C - 5
D8	D - 3
D9	B - 3
D11	C - 2
D12	B - 2
D13	C - 4
D14	C - 2
D15	C - 2
D16	C - 2
D17	C - 4
D18	C - 2
D20	C - 2
E1	D - 3
E2	C - 4
F1	D - 4
IC3	C - 4
Q5	F - 4
Q6	F - 3
Q7	D - 2
Q8	D - 2
Q9	C - 2
Q11	C - 1
Q12	C - 2
Q13	D - 2
Q14	D - 2
Q15	D - 2
Q16	D - 3
Q17	C - 2
Q18	C - 2
Q19	C - 2
Q20	C - 2
Q21	B - 2
Q22	B - 2
Q24	C - 3
Q25	C - 3
Q26	D - 2
Q27	D - 1
Q28	D - 2
RV3	C - 4
RV4	D - 3
RV6	B - 2
TP6	C - 4
TP7	C - 4
TP8	D - 5
TP9	D - 1
TP10	C - 1
TP11	C - 1
TP12	D - 4
TP13	B - 1
TP14	C - 3
TP15	B - 3


A
B
C
D
E
F
1
2
3
4
5
CN716
D4
TP11
CN713
TP10
TP9
CN705
C27
DDC1
TP13
Q11
R80
CN711
CN710
Q27
C26
DC-DC
CONVERTER
D20
R63
R64
D12
D11
Q26
Q28
RV6
C32
R33
Q9
Q8
Q7
C25
R79
R70
R42
Q22
Q21
Q19
Q17
Q12
Q14
R47
R56
R54
R52
R57
Q20
Q18
R43
Q13
R48
Q15
C24
BATTERY
MIRROR
TP15
D9
D14
R49
Q16
D8
R90
CN703
CN702
R68
R69
SL2
R83
R84
TP14
C29
C19
E1
R85
BM1
Q6
Q24
C22
C20
FB1
R75
R74
RV4
R39
Q25
R40
C21
TP6
RV3
R73
D6
TP7
R35
R34
D17
C31
C30
D13
R37
R58
R36
R59
IC3
C17
CN714
F1
TP12
E2
R60
C18
CN706
D7
R76
D5
TP8
CN708
Q5
CN707
CN704
CN718
E
B
C

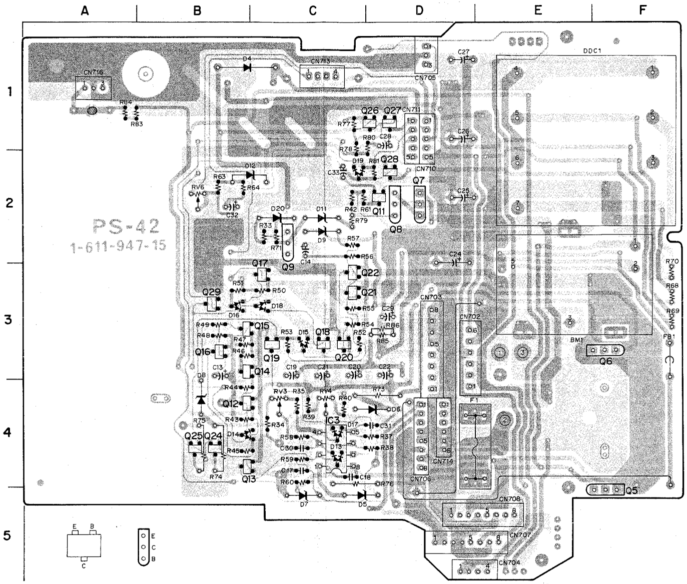
PS-42 -SOLDERING SIDE-
1-611-947-14
VO-6800 -------- PS-42
VO-6800PS ------ PS-42A



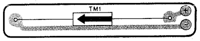
TM-19 -SOLDERING SIDE-
1-613-881-11
VO-6800
VO-6800PS

S/N 13481 TO 16330 (UC)
S/N 10661 TO 11560 (J)

BM1	D - 3
CN702	D - 3
CN703	D - 3
CN704	D - 5
CN705	D - 1
CN706	D - 4
CN707	D - 5
CN708	E - 5
CN710	D - 1
CN711	D - 1
CN713	C - 1
CN714	D - 4
CN716	A - 1
D4	B - 1
D5	C - 5
D6	D - 4
D7	C - 5
D8	B - 4
D9	C - 2
D11	C - 2
D12	B - 2
D13	C - 4
D14	B - 4
D15	C - 3
D16	B - 3
D17	C - 4
D18	C - 3
D19	C - 2
D20	C - 2
DDC1	E - 1
F1	D - 4
IC3	C - 4
Q5	F - 4
Q6	F - 3
Q7	D - 2
Q8	D - 2
Q9	C - 2
Q11	D - 2
Q12	B - 4
Q13	B - 4
Q14	B - 3
Q15	B - 3
Q16	B - 3
Q17	C - 3
Q18	C - 3
Q19	C - 3
Q20	C - 3
Q21	C - 3
Q22	C - 3
Q24	B - 4
Q25	B - 4
Q26	D - 1
Q27	D - 1
Q28	D - 2
Q29	B - 3
RV3	C - 4
RV4	C - 4
RV6	B - 2


A
B
C
D
E
F
1
2
3
4
5
PS-42
1-611-947-15
CN716
R84
R83
D4
CN713
CN705
C27
DDC1
Q26
Q27
CN711
R77
R80
C28
R78
C26
D19
R81
Q28
C33
CN710
D12
Q7
R63
R64
RV6
C25
C32
D20
D11
R42
R61
Q11
R79
Q8
R33
D9
R57
R71
Q9
C14
R56
C24
Q17
Q22
R51
R50
Q21
Q29
D18
R55
C29
D16
CN703
CN702
R49
Q15
R54
R86
R48
R53
D15
Q18
R52
R85
BM1
Q6
Q16
R47
R46
Q19
Q20
C13
C19
C21
C20
C22
Q14
D8
R44
RV3
R35
RV4
R40
R73
Q12
D6
R75
R43
R34
R39
IC3
D17
C31
F1
Q25
Q24
D14
R58
R37
R45
C30
D13
R38
R59
CN714
CN706
C17
C18
R74
Q13
R60
R76
D7
D5
Q5
CN708
CN707
CN704
R70
R68
R69
FB1
E
B
C

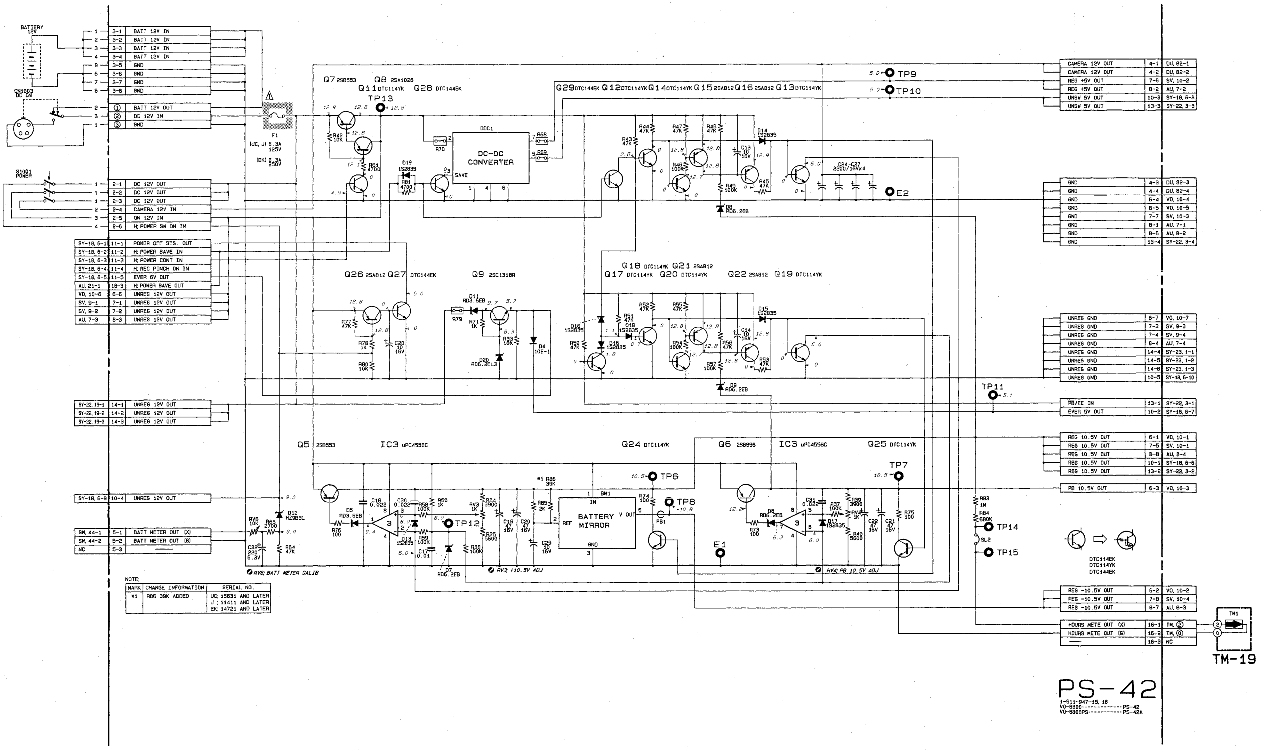
PS-42 -SOLDERING SIDE-
1-611-947-15,16
VO-6800----PS-42
VO-6800PS---PS-42A



TM-19 -SOLDERING SIDE-
1-613-881-11
VO-6800
VO-6800PS

PS-42 (POWER SUPPLY)
TM-19 (HOURS METER)

S/N 13481 TO 16330 (UC)
S/N 10661 TO 11560 (J)


BATTERY 12V
CN1003 DC IN
S1001 POWER
F1 (UC, J) 6.3A 125V (EK) 6.3A 250V
BATT 12V IN
GND
BATT 12V OUT
DC 12V IN
DC 12V OUT
CAMERA 12V IN
ON 12V IN
H: POWER SW ON IN
POWER OFF STS. OUT
H: POWER SAVE IN
H: POWER CONT IN
H: REC PINCH ON IN
EVER 6V OUT
H: POWER SAVE OUT
UNREG 12V OUT
BATT METER OUT (X)
BATT METER OUT (G)
Q7 2SB553
Q8 2SA1026
Q11 DTC114YK
Q28 DTC144EK
TP13
DDC1
DC-DC CONVERTER
SAVE
Q29 DTC144EK
Q12 DTC114YK
Q14 DTC114YK
Q15 2SA812
Q16 2SA812
Q13 DTC114YK
TP9
TP10
E2
C24-C27 2200/16V×4
Q26 2SA812
Q27 DTC144EK
Q9 2SC1318A
Q18 DTC114YK
Q21 2SA812
Q17 DTC114YK
Q20 DTC114YK
Q22 2SA812
Q19 DTC114YK
TP11
Q5 2SB553
IC3 uPC4558C
Q24 DTC114YK
Q6 2SB856
IC3 uPC4558C
Q25 DTC114YK
TP6
TP8
TP12
E1
TP7
TP14
TP15
SL2
BM1
BATTERY MIRROR
IN
V OUT
REF
GND
RV6; BATT METER CALIB
RV3; +10.5V ADJ
RV4; PB 10.5V ADJ
DTC114EK
DTC114YK
DTC144EK
CAMERA 12V OUT
REG +5V OUT
UNSW 5V OUT
UNREG GND
PB/EE IN
EVER 5V OUT
REG 10.5V OUT
PB 10.5V OUT
REG -10.5V OUT
HOURS METE OUT (X)
HOURS METE OUT (G)
TM1
TM-19

NOTE;

MARK	CHANGE INFORMATION	SERIAL NO.
*1	R86 39K ADDED	UC; 15631 AND LATER J ; 11411 AND LATER EK; 14721 AND LATER

PS-42

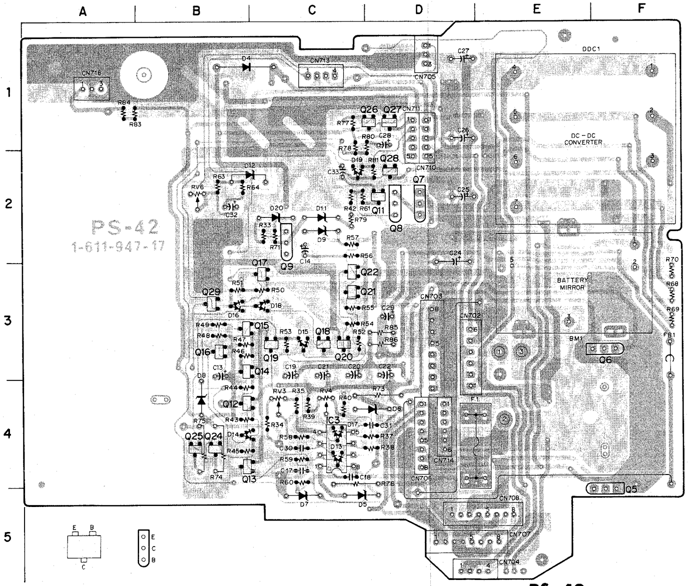
1-611-947-15, 16
VO-6800--------------PS-42
VO-6800PS------------PS-42A

NOTE: **The shaded and ⚠ -marked components are critical to safety. Replace only with same components as specified.**

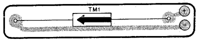
PS-42 (POWER SUPPLY)
TM-19 (HOURS METER)

S/N 16331 AND LATER (UC)
S/N 11561 AND LATER (J)

BM1	E - 3
CN702	D - 3
CN703	D - 3
CN704	D - 5
CN705	D - 1
CN706	D - 4
CN707	D - 5
CN708	E - 5
CN710	D - 1
CN711	D - 1
CN713	C - 1
CN714	D - 4
CN716	A - 1
D4	B - 1
D5	C - 5
D6	D - 4
D7	C - 5
D8	B - 4
D9	C - 2
D11	C - 2
D12	B - 2
D13	C - 4
D14	B - 4
D15	C - 3
D16	B - 3
D17	C - 4
D18	C - 3
D19	C - 2
D20	C - 2
DDC1	E - 1
F1	D - 4
IC3	C - 4
Q5	F - 4
Q6	F - 3
Q7	D - 2
Q8	D - 2
Q9	C - 2
Q11	D - 2
Q12	B - 4
Q13	B - 4
Q14	B - 3
Q15	B - 3
Q16	B - 3
Q17	C - 3
Q18	C - 3
Q19	C - 3
Q20	C - 3
Q21	C - 3
Q22	C - 3
Q24	B - 4
Q25	B - 4
Q26	D - 1
Q27	D - 1
Q28	D - 2
Q29	B - 3
RV3	C - 4
RV4	C - 4
RV6	B - 2


A
B
C
D
E
F
1
2
3
4
5
PS-42
1-611-947-17
CN716
R84
R83
D4
CN713
CN705
C27
DDC1
DC-DC CONVERTER
Q26
Q27
CN711
R77
R80
C28
R78
D19
R81
Q28
C33
CN710
C26
Q7
R63
D12
RV6
R64
C32
D20
D11
R42
R61
Q11
R79
Q8
C25
R33
D9
R71
Q9
C14
R57
R56
C24
Q17
Q22
Q21
BATTERY MIRROR
R70
R68
R69
Q29
R51
R50
D16
D18
R55
C29
CN703
CN702
R49
Q15
R53
D15
Q18
R54
R52
R85
R48
R47
R46
Q16
Q19
Q20
R86
BM1
Q6
FB1
C13
Q14
C19
C21
C20
C22
D8
R44
RV3
R35
RV4
R73
Q12
R40
D6
F1
R75
R43
R34
R39
IC3
D17
C31
Q25
Q24
D14
R58
C30
D13
R37
R38
CN714
R45
R59
CN706
R74
Q13
C17
C18
R60
R76
Q5
D7
D5
CN708
CN707
CN704
E
B
C

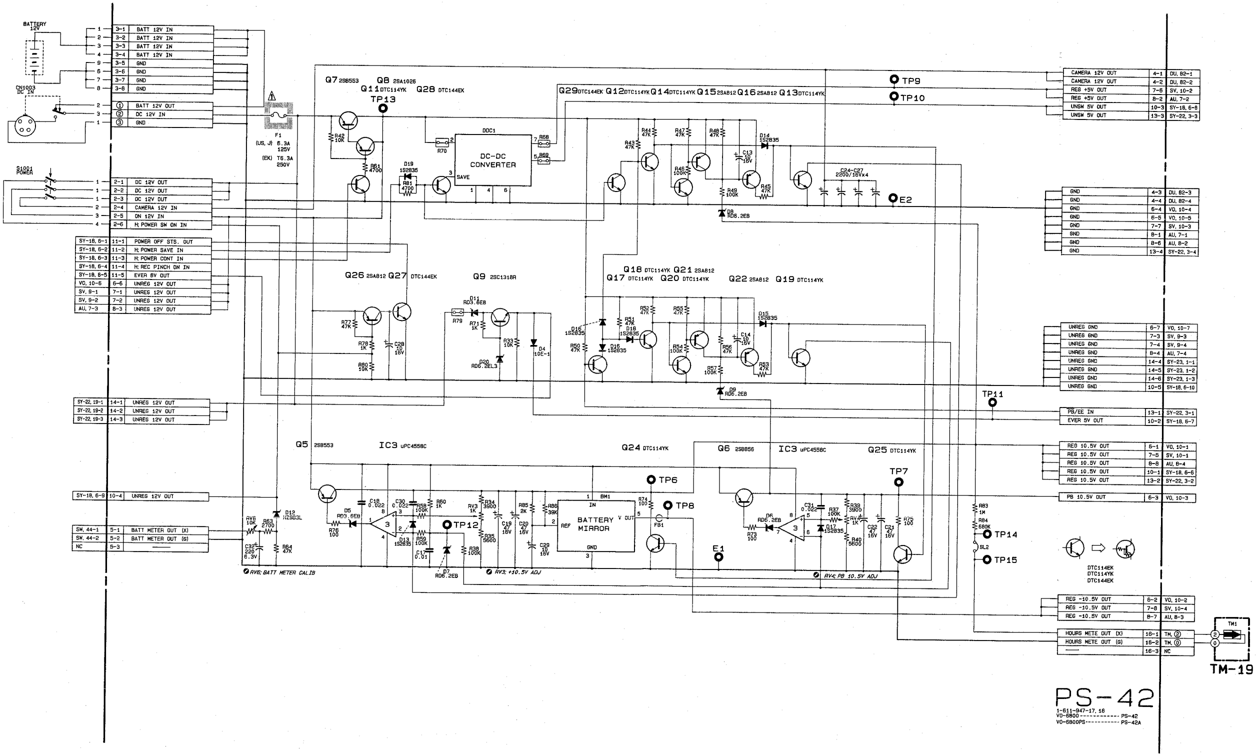
PS-42 -SOLDERING SIDE-
1-611-947-17,18
VO-6800-----PS-42
VO-6800PS----PS-42A



TM-19 -SOLDERING SIDE-
1-613-881-11
VO-6800
VO-6800PS

PS-42 (POWER SUPPLY)
TM-19 (HOURS METER)

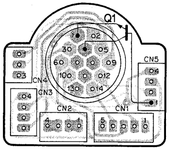
S/N 16331 AND LATER (UC)
S/N 11561 AND LATER (J)


BATTERY 12V
CN1003 DC IN
S1001 POWER
BATT 12V IN
GND
BATT 12V OUT
DC 12V IN
DC 12V OUT
CAMERA 12V IN
ON 12V IN
H: POWER SW ON IN
POWER OFF STS. OUT
H: POWER SAVE IN
H: POWER CONT IN
H: REC PINCH ON IN
EVER 8V OUT
UNREG 12V OUT
BATT METER OUT (X)
BATT METER OUT (G)
F1 (US, J) 6.3A 125V (EK) T6.3A 250V
Q7 2SB553
Q8 2SA1026
Q11 DTC114YK
Q28 DTC144EK
TP13
DDC1
DC-DC CONVERTER
SAVE
Q29 DTC144EK Q12 DTC114YK Q14 DTC114YK Q15 2SA812 Q16 2SA812 Q13 DTC114YK
TP9
TP10
E2
C24-C27 2200/16Vx4
Q26 2SA812 Q27 DTC144EK
Q9 2SC1318R
Q18 DTC114YK Q21 2SA812
Q17 DTC114YK Q20 DTC114YK
Q22 2SA812 Q19 DTC114YK
TP11
Q5 2SB553
IC3 uPC4558C
Q24 DTC114YK
Q6 2SB856
IC3 uPC4558C
Q25 DTC114YK
TP6
TP7
TP8
TP12
TP14
TP15
E1
BATTERY MIRROR
IN
V OUT
REF
GND
RV6: BATT METER CALIB
RV3: +10.5V ADJ
RV4: PB 10.5V ADJ
CAMERA 12V OUT
REG +5V OUT
UNSW 5V OUT
UNREG GND
PB/EE IN
EVER 5V OUT
REG 10.5V OUT
PB 10.5V OUT
REG -10.5V OUT
HOURS METE OUT (X)
HOURS METE OUT (G)
DTC114EK
DTC114YK
DTC144EK
TM1
TM-19
PS-42
1-611-947-17, 16
VO-6800 PS-42
VO-6800PS PS-42A

NOTE: The shaded and ⚠ -marked components are critical to safety.
Replace only with same components as specified.

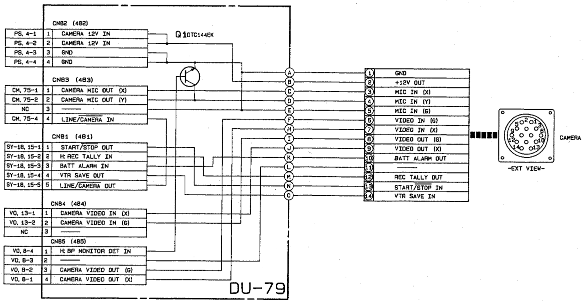
DU-79 (CAMERA INPUT)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


Q1
1
2
3
5
6
9
10
12
13
14
CN1
CN2
CN3
CN4
CN5
4
5

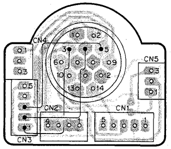
DU-79 -SOLDERING SIDE-
1-611-958-11
VO-6800

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


CN82 (482)
PS, 4-1 1 CAMERA 12V IN
PS, 4-2 2 CAMERA 12V IN
PS, 4-3 3 GND
PS, 4-4 4 GND
Q1 DTC144EK
CN83 (483)
CM, 75-1 1 CAMERA MIC OUT (X)
CM, 75-2 2 CAMERA MIC OUT (Y)
NC 3 ———
CM, 75-4 4 LINE/CAMERA IN
CN81 (481)
SY-18, 15-1 1 START/STOP OUT
SY-18, 15-2 2 H: REC TALLY IN
SY-18, 15-3 3 BATT ALARM IN
SY-18, 15-4 4 VTR SAVE OUT
SY-18, 15-5 5 LINE/CAMERA OUT
CN84 (484)
VO, 13-1 1 CAMERA VIDEO IN (X)
VO, 13-2 2 CAMERA VIDEO IN (G)
NC 3 ———
CN85 (485)
VO, 8-4 1 H: BP MONITOR DET IN
VO, 8-3 2 ———
VO, 8-2 3 CAMERA VIDEO OUT (G)
VO, 8-1 4 CAMERA VIDEO OUT (X)
A
B
C
D
E
F
H
I
J
K
L
M
N
O
1 GND
2 +12V OUT
3 MIC IN (X)
4 MIC IN (Y)
5 MIC IN (G)
6 VIDEO IN (G)
7 VIDEO IN (X)
8 VIDEO OUT (G)
9 VIDEO OUT (X)
10 BATT ALARM OUT
11 ———
12 REC TALLY OUT
13 START/STOP IN
14 VTR SAVE IN
CAMERA
-EXT VIEW-
DU-79

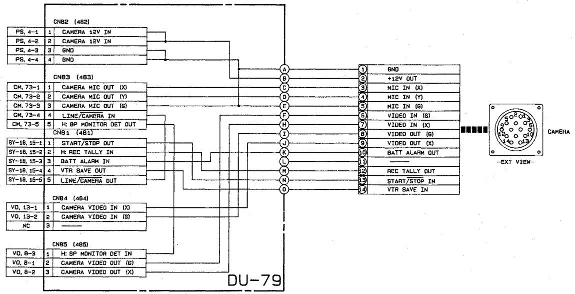
1-611-958-11
VO-6800

S/N 10031 AND LATER (UC)
S/N 10011 AND LATER (J)


1
2
3
5
6
9
10
12
13
14
CN1
CN2
CN3
CN4
CN5
4
5

DU-79 -SOLDERING SIDE-
1-611-958-12
VO-6800

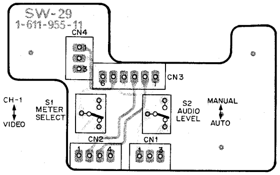
S/N 10031 AND LATER (UC)
S/N 10011 AND LATER (J)


CN82 (482)
PS, 4-1 1 CAMERA 12V IN
PS, 4-2 2 CAMERA 12V IN
PS, 4-3 3 GND
PS, 4-4 4 GND
CN83 (483)
CM, 73-1 1 CAMERA MIC OUT (X)
CM, 73-2 2 CAMERA MIC OUT (Y)
CM, 73-3 3 CAMERA MIC OUT (G)
CM, 73-4 4 LINE/CAMERA IN
CM, 73-5 5 H: BP MONITOR DET OUT
CN81 (481)
SY-18, 15-1 1 START/STOP OUT
SY-18, 15-2 2 H: REC TALLY IN
SY-18, 15-3 3 BATT ALARM IN
SY-18, 15-4 4 VTR SAVE OUT
SY-18, 15-5 5 LINE/CAMERA OUT
CN84 (484)
VO, 13-1 1 CAMERA VIDEO IN (X)
VO, 13-2 2 CAMERA VIDEO IN (G)
NC 3 ———
CN85 (485)
VO, 8-3 1 H: SP MONITOR DET IN
VO, 8-1 2 CAMERA VIDEO OUT (G)
VO, 8-2 3 CAMERA VIDEO OUT (X)
A
B
C
D
E
F
H
I
J
K
L
M
N
O
1 GND
2 +12V OUT
3 MIC IN (X)
4 MIC IN (Y)
5 MIC IN (G)
6 VIDEO IN (G)
7 VIDEO IN (X)
8 VIDEO OUT (G)
9 VIDEO OUT (X)
10 BATT ALARM OUT
11 ———
12 REC TALLY OUT
13 START/STOP IN
14 VTR SAVE IN
CAMERA
-EXT VIEW-
DU-79

1-611-958-12
VO-6800

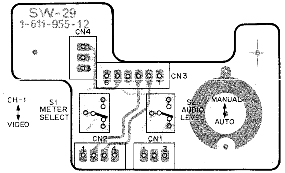
SW-29 (AUDIO LEVEL/METER SELECT)

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)

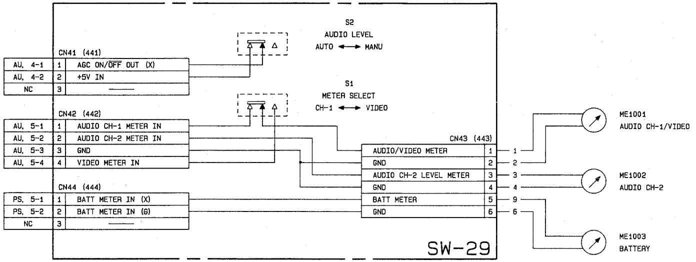

SW-29
1-611-955-11
CN4
CN3
6
1
CH-1
VIDEO
S1
METER
SELECT
S2
AUDIO
LEVEL
MANUAL
AUTO
CN2
CN1
1
4
1
3

SW-29 -SOLDERING SIDE-
1-611-955-11
VO-6800

S/N 10031 AND LATER (UC)
S/N 10011 AND LATER (J)


SW-29
1-611-955-12
CN4
CN3
6
1
CH-1
VIDEO
S1
METER
SELECT
S2
AUDIO
LEVEL
MANUAL
AUTO
CN2
CN1
1
4
1
3

SW-29 -SOLDERING SIDE-
1-611-955-12
VO-6800
VO-6800PS


S2
AUDIO LEVEL
AUTO ⟷ MANU
S1
METER SELECT
CH-1 ⟷ VIDEO
CN41 (441)
AU, 4-1
1
AGC ON/$\overline{\text{OFF}}$ OUT (X)
AU, 4-2
2
+5V IN
NC
3
CN42 (442)
AU, 5-1
1
AUDIO CH-1 METER IN
AU, 5-2
2
AUDIO CH-2 METER IN
AU, 5-3
3
GND
AU, 5-4
4
VIDEO METER IN
CN44 (444)
PS, 5-1
1
BATT METER IN (X)
PS, 5-2
2
BATT METER IN (G)
NC
3
CN43 (443)
AUDIO/VIDEO METER
1
GND
2
AUDIO CH-2 LEVEL METER
3
GND
4
BATT METER
5
GND
6
1
2
3
4
9
6
ME1001
AUDIO CH-1/VIDEO
ME1002
AUDIO CH-2
ME1003
BATTERY
SW-29

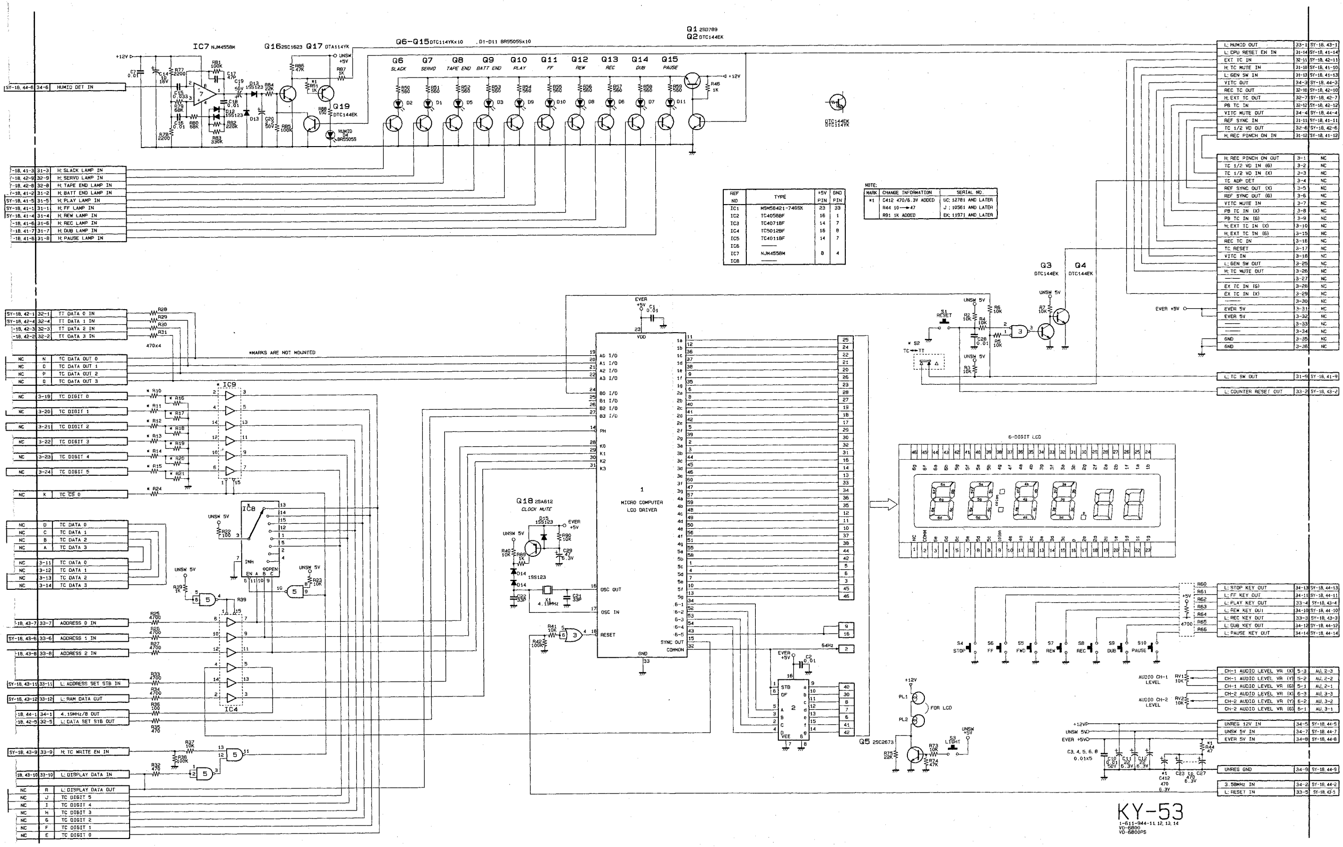
1-611-955-11, 12
VO-6800
VO-6800PS

ME1001
AUDIO CH-1/VIDEO

ME1002
AUDIO CH-2

ME1003
BATTERY

K -53 (FUNCTION KEY/DISPLAY)


IC7 NJM4558M
Q16 2SC1623
Q17 DTA114YK
Q19 DTC144EK
Q6–Q15 DTC114YKx10
D1–D11 BR5505Sx10
Q1 2SD789
Q2 DTC144EK
Q6 SLACK
Q7 SERVO
Q8 TAPE END
Q9 BATT END
Q10 PLAY
Q11 FF
Q12 REW
Q13 REC
Q14 DUB
Q15 PAUSE
HUMID DET IN
H: SLACK LAMP IN
H: SERVO LAMP IN
H: TAPE END LAMP IN
H: BATT END LAMP IN
H: PLAY LAMP IN
H: FF LAMP IN
H: REW LAMP IN
H: REC LAMP IN
H: DUB LAMP IN
H: PAUSE LAMP IN
TT DATA 0 IN
TT DATA 1 IN
TT DATA 2 IN
TT DATA 3 IN
TC DATA OUT 0
TC DATA OUT 1
TC DATA OUT 2
TC DATA OUT 3
*MARKS ARE NOT MOUNTED
TC DIGIT 0
TC DIGIT 1
TC DIGIT 2
TC DIGIT 3
TC DIGIT 4
TC DIGIT 5
TC CS 0
IC9
IC8
IC4
ADDRESS 0 IN
ADDRESS 1 IN
ADDRESS 2 IN
L: ADDRESS SET STB IN
L: RAM DATA OUT
4.19MHz/8 OUT
L: DATA SET STB OUT
H: TC WRITE EN IN
L: DISPLAY DATA IN
L: DISPLAY DATA OUT
Q18 2SA612
CLOCK MUTE
X1 4.19MHz
1
MICRO COMPUTER
LCD DRIVER
OSC OUT
OSC IN
RESET
SYNC OUT
COMMON
54Hz
6-DIGIT LCD
Q3 DTC144EK
Q4 DTC144EK
S1 RESET
S2 TC↔TT
Q5 2SC2673
PL1
PL2
FOR LCD
S3 LIGHT
S4 STOP
S6 FF
S5 FWD
S7 REW
S8 REC
S9 DUB
S10 PAUSE
L: STOP KEY OUT
L: FF KEY OUT
L: PLAY KEY OUT
L: REW KEY OUT
L: REC KEY OUT
L: DUB KEY OUT
L: PAUSE KEY OUT
AUDIO CH-1 LEVEL
AUDIO CH-2 LEVEL
CH-1 AUDIO LEVEL VR
CH-2 AUDIO LEVEL VR
UNREG 12V IN
UNSW 5V IN
EVER 5V IN
UNREG GND
3.58MHz IN
L: RESET IN
L: HUMID OUT
L: CPU RESET EN IN
EXT TC IN
H: TC MUTE IN
L: GEN SW IN
VITC OUT
REC TC OUT
H: EXT TC OUT
PB TC IN
VITC MUTE OUT
REF SYNC IN
TC 1/2 VD OUT
H: REC PINCH ON IN
L: TC SW OUT
L: COUNTER RESET OUT

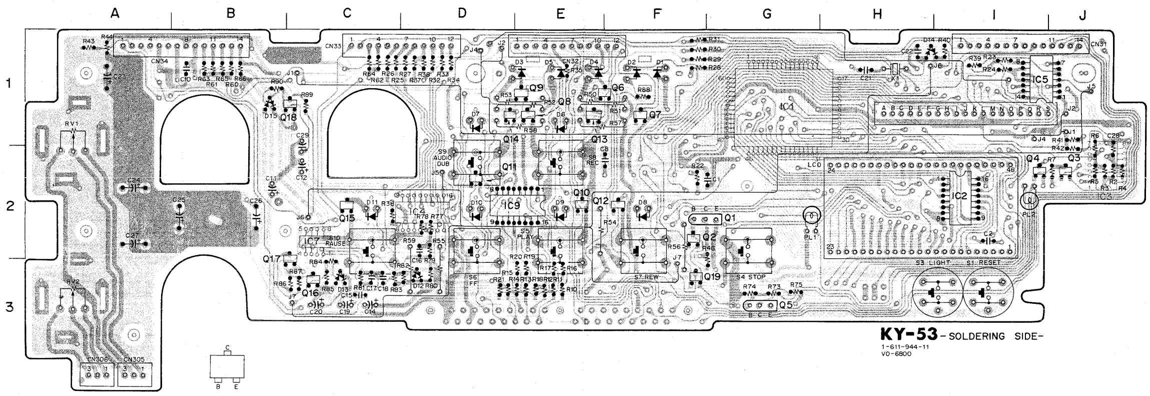
REF NO	TYPE	+5V PIN	GND PIN
IC1	MSM58421-746SK	23	33
IC2	TC4056BF	16	1
IC3	TC4071BF	14	7
IC4	TC5012BF	16	8
IC5	TC4011BF	14	7
IC6	———		
IC7	NJM4558M	8	4
IC8	———		

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
*1	C412 470/6.3V ADDED R44 10 → 47 R91 1K ADDED	UC; 12781 AND LATER J ; 10561 AND LATER EK; 11971 AND LATER

KY-53
1-611-944-11, 12, 13, 14
VO-6800
VO-6800PS

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)

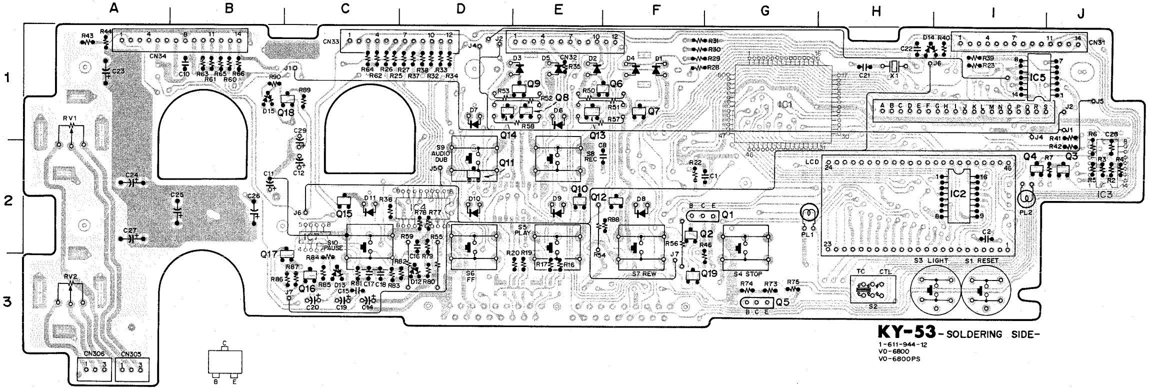

A
B
C
D
E
F
G
H
I
J
1
2
3
CN34
CN33
CN32
CN31
CN305
CN306
RV1
RV2
IC1
IC2
IC4
IC5
IC7
IC9
S9 AUDIO DUB
S8 REC
S10 PAUSE
S5 PLAY
S6 FF
S7 REW
S4 STOP
S3 LIGHT
S1 RESET
LCD
PL1
PL2
X1
C
B
E
KY-53 - SOLDERING SIDE-
1-611-944-11
V0-6800

CN31	I - 1	IC2	I - 2	Q16	C - 3
CN32	E - 1	IC3	J - 2	Q17	C - 3
CN33	D - 1	IC4	D - 2	Q18	C - 1
CN34	B - 1	IC5	I - 1	Q19	F - 3
CN305	A - 3	IC7	C - 2		
CN306	A - 3	IC9	E - 2	RV1	A - 1
				RV2	A - 3
D1	F - 1	Q1	G - 2		
D2	F - 1	Q2	F - 2	S1	I - 3
D3	E - 1	Q3	J - 2	S3	I - 3
D4	E - 1	Q4	I - 2	S4	G - 2
D5	E - 1	Q5	G - 3	S5	E - 2
D6	E - 1	Q6	F - 1	S6	D - 2
D7	D - 1	Q7	F - 1	S7	F - 2
D8	F - 2	Q8	E - 1	S8	E - 2
D9	E - 2	Q9	E - 1	S9	D - 2
D10	D - 2	Q10	E - 2	S10	C - 2
D11	C - 2	Q11	D - 2		
D12	D - 3	Q12	F - 2	X1	H - 1
D13	C - 3	Q13	E - 1		
D14	H - 1	Q14	D - 1		
D15	B - 1	Q15	C - 2		

KY-53 (FUNCTION KEY/DISPLAY)

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)

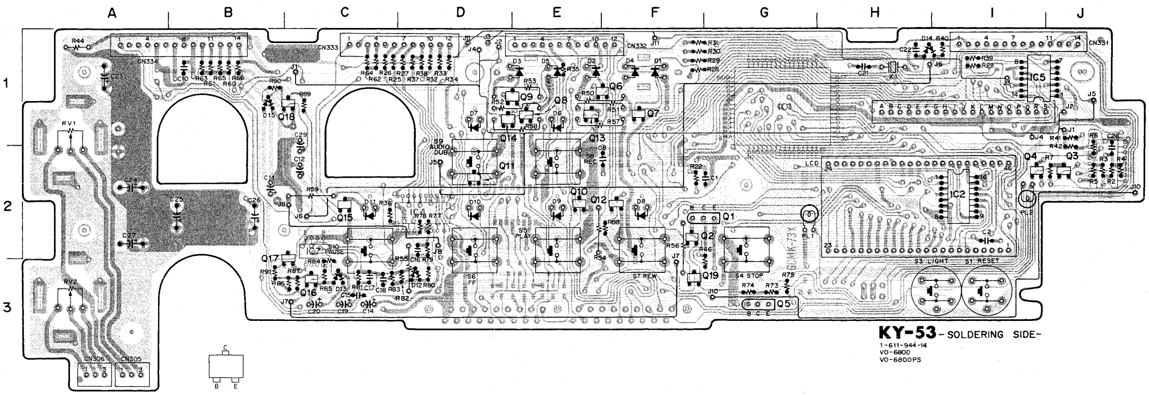
S/N
S/N


A
B
C
D
E
F
G
H
I
J
1
2
3
CN31
CN32
CN33
CN34
CN305
CN306
IC1
IC2
IC3
IC4
IC5
RV1
RV2
S9 AUDIO DUB
S8 REC
S10 PAUSE
S6 FF
S5 PLAY
S7 REW
S4 STOP
S3 LIGHT
S1 RESET
S2
TC
CTL
LCD
PL1
PL2
X1
B C E
C
B E

KY-53-SOLDERING SIDE-
1-611-944-12
VO-6800
VO-6800PS

CN31	I - 1	IC1	G - 1	RV1	A - 1
CN32	E - 1	IC2	I - 2	RV2	A - 3
CN33	D - 1	IC5	I - 1		
CN34	B - 1			S1	I - 3
CN305	A - 3	Q1	G - 2	S2	H - 3
CN306	A - 3	Q2	F - 2	S3	I - 3
		Q3	J - 2	S4	G - 2
D1	F - 1	Q4	I - 2	S5	E - 2
D2	E - 1	Q5	G - 3	S6	D - 2
D3	E - 1	Q6	F - 1	S7	F - 2
D4	F - 1	Q7	F - 1	S8	E - 2
D5	E - 1	Q8	E - 1	S9	D - 2
D6	E - 1	Q9	E - 1	S10	C - 2
D7	D - 1	Q10	E - 2		
D8	F - 2	Q11	D - 2	X1	H - 1
D9	E - 2	Q12	F - 2		
D10	D - 2	Q13	E - 1		
D11	C - 2	Q14	D - 1		
D12	D - 3	Q15	C - 2		
D13	C - 3	Q16	C - 3		
D14	H - 1	Q17	C - 3		
D15	B - 1	Q18	C - 1		
		Q19	F - 3		

S/N 12781 AND LATER (UC)
S/N 10561 AND LATER (J)


A
B
C
D
E
F
G
H
I
J
1
2
3
CN331
CN332
CN333
CN334
CN305
CN306
IC1
IC2
IC5
RV1
RV2
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
S9 AUDIO DUB
S8 REC
S5 PLAY
S6 FF
S7 REW
S4 STOP
S10 PAUSE
S3 LIGHT
S1 RESET
X1
LCD
PL1
PL2
B C E
C
B E

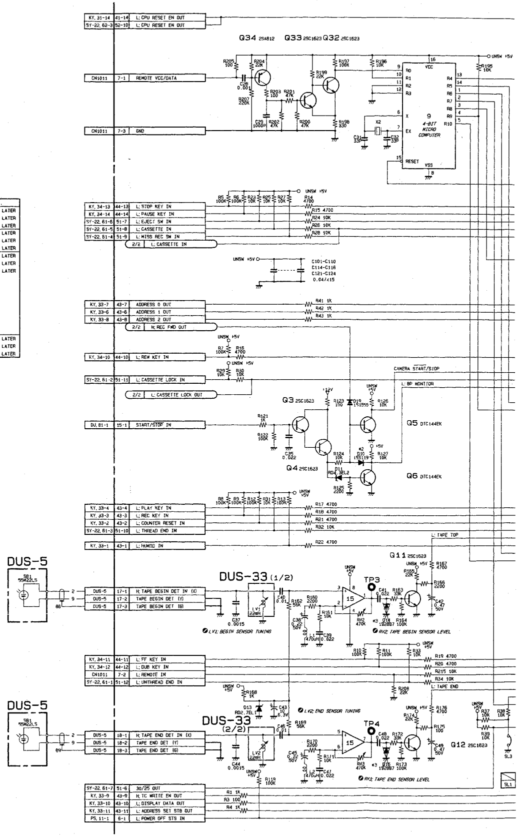
KY-53 - SOLDERING SIDE-
1-611-944-14
VO-6800
VO-6800PS

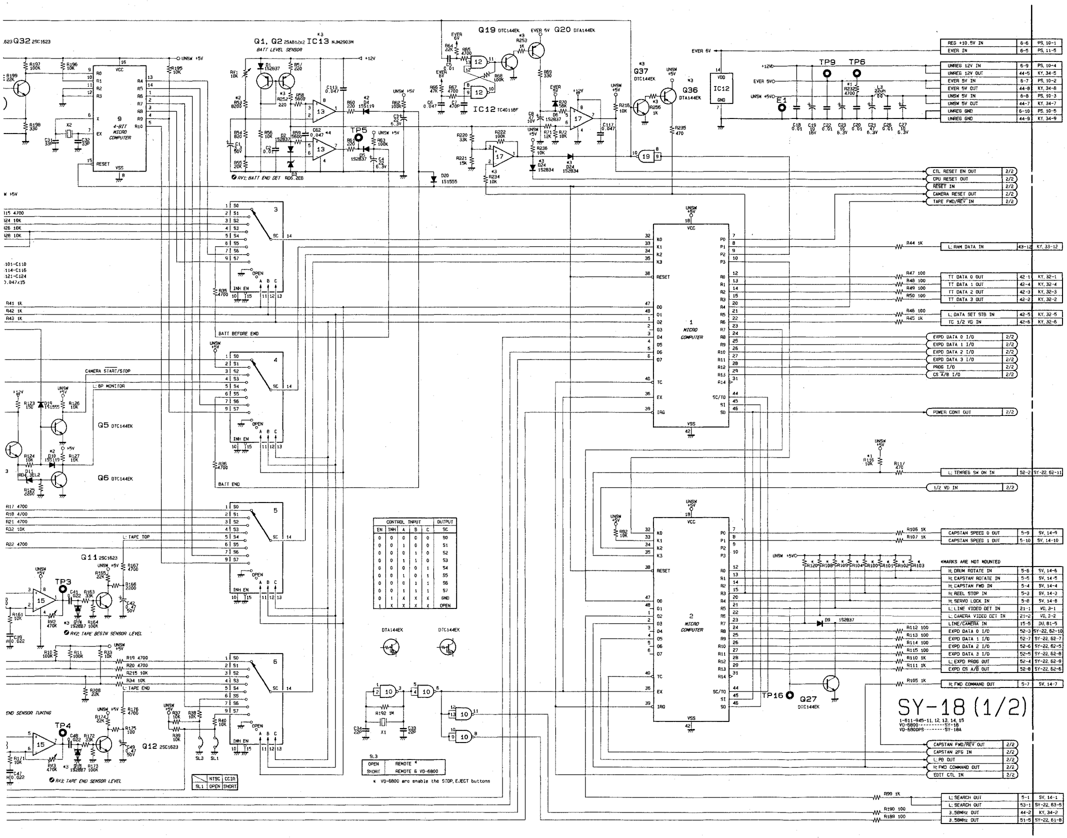
CN331	I - 1	IC1	G - 1	RV1	A - 1
CN332	E - 1	IC2	I - 2	RV2	A - 3
CN333	D - 1	IC5	I - 1		
CN334	B - 1			S1	I - 3
CN305	A - 3	Q1	G - 2	S3	I - 3
CN306	A - 3	Q2	F - 2	S4	G - 2
		Q3	J - 2	S5	E - 2
D1	F - 1	Q4	I - 2	S6	D - 2
D2	E - 1	Q5	G - 3	S7	F - 2
D3	E - 1	Q6	F - 1	S8	E - 2
D4	F - 1	Q7	F - 1	S9	D - 2
D5	E - 1	Q8	E - 1	S10	C - 2
D6	E - 1	Q9	E - 1		
D7	D - 1	Q10	E - 2	X1	H - 1
D8	F - 2	Q11	D - 2		
D9	E - 2	Q12	F - 2		
D10	D - 2	Q13	E - 1		
D11	C - 2	Q14	D - 1		
D12	D - 3	Q15	C - 2		
D13	C - 3	Q16	C - 3		
D14	H - 1	Q17	C - 3		
D15	B - 1	Q18	C - 1		
		Q19	F - 3		

SY-18 (1/2) (SYSTEM CONTROL)
DUS-33
DUS-5

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
*1	R116 100K → 10K R232 4700 ADDED	UC; 10631 AND LATER J ; 10261 AND LATER EK; 10521 AND LATER
*2	D4, D10) 1S1555 → 1SS119 R53 5600 → 8200	UC; 11031 AND LATER J ; 10311 AND LATER EK; 11021 AND LATER
*3	D14, D15) 1S2837 DELETED D21, D22) → D24 R237 → R234 R252 220 ADDED R253 1K ADDED R256 1K ADDED Q36 DTA144ES → DTA144EK Q37 DTC144ES → DTC144EK IC13 NJM4558M → NJM2903M	UC; 12781 AND LATER J ; 10561 AND LATER EK; 11971 AND LATER
*4	C62 0.047 ADDED	UC; 13681 AND LATER J ; 10761 AND LATER EK; 12751 AND LATER


KY, 31-14 | 41-14 | L: CPU RESET EN OUT
SY-22, 62-3 | 52-10 | L: CPU RESET EN OUT
Q34 2SA812
Q33 2SC1623
Q32 2SC1623
CN1011 | 7-1 | REMOTE VCC/DATA
CN1011 | 7-3 | GND
UNSW +5V
9
4-BIT MICRO COMPUTER
VCC
RESET
VSS
X2
KY, 34-13 | 44-13 | L: STOP KEY IN
KY, 34-14 | 44-14 | L: PAUSE KEY IN
SY-22, 61-6 | 51-7 | L: EJECT SW IN
SY-22, 61-5 | 51-8 | L: CASSETTE IN
SY-22, 61-4 | 51-9 | L: MISS REC SW IN
2/2 | L: CASSETTE IN
C101-C110
C114-C116
C121-C124
0.047×15
KY, 33-7 | 43-7 | ADDRESS 0 OUT
KY, 33-6 | 43-6 | ADDRESS 1 OUT
KY, 33-8 | 43-8 | ADDRESS 2 OUT
2/2 | H: REC FWD OUT
KY, 34-10 | 44-10 | L: REW KEY IN
SY-22, 61-2 | 51-11 | L: CASSETTE LOCK IN
2/2 | L: CASSETTE LOCK OUT
CAMERA START/STOP
L: BP MONITOR
Q3 2SC1623
Q4 2SC1623
Q5 DTC144EK
Q6 DTC144EK
DU, 81-1 | 15-1 | START/STOP IN
KY, 33-4 | 43-4 | L: PLAY KEY IN
KY, 33-3 | 43-3 | L: REC KEY IN
KY, 33-2 | 43-2 | L: COUNTER RESET IN
SY-22, 61-3 | 51-10 | L: THREAD END IN
KY, 33-1 | 43-1 | L: HUMID IN
L: TAPE TOP
Q11 2SC1623
DUS-5
SB1 55M22LS
DUS-33 (1/2)
TP3
DUS-5 | 17-1 | H: TAPE BEGIN DET IN (X)
DUS-5 | 17-2 | TAPE BEGIN DET (Y)
DUS-5 | 17-3 | TAPE BEGIN DET (G)
LV1: BEGIN SENSOR TUNING
RV2: TAPE BEGIN SENSOR LEVEL
KY, 34-11 | 44-11 | L: FF KEY IN
KY, 34-12 | 44-12 | L: DUB KEY IN
CN1011 | 7-2 | L: REMOTE IN
SY-22, 61-1 | 51-12 | L: UNTHREAD END IN
L: TAPE END
LV2: END SENSOR TUNING
DUS-5
SB1 55M22LS
DUS-33 (2/2)
TP4
DUS-5 | 18-1 | H: TAPE END DET IN (X)
DUS-5 | 18-2 | TAPE END DET (Y)
DUS-5 | 18-3 | TAPE END DET (G)
Q12 2SC1623
RV3: TAPE END SENSOR LEVEL
SL3
SL1
SY-22, 61-7 | 51-6 | 30/25 OUT
KY, 33-9 | 43-9 | H: TC WRITE EN OUT
KY, 33-10 | 43-10 | L: DISPLAY DATA OUT
KY, 33-11 | 43-11 | L: ADDRESS SET STB OUT
PS, 11-1 | 6-1 | L: POWER OFF STS IN


Q32 2SC1623
9 4-BIT MICRO COMPUTER
Q1, Q2 2SA812x2 IC13 NJM2903M
BATT LEVEL SENSOR
RV1: BATT END DET
TP5
Q19 DTC144EK
Q20 DTA144EK
IC12 TC4011BF
Q37 DTC144EK
Q36 DTA144EK
IC12 VDD GND
EVER 6V
EVER 5V
UNSW +5V
+12V
TP9
TP6
E1
3
4
5
6
BATT BEFORE END
BATT END
CAMERA START/STOP
L: BP MONITOR
L: TAPE TOP
L: TAPE END
Q5 DTC144EK
Q6 DTC144EK
Q11 2SC1623
Q12 2SC1623
TP3
TP4
RV2 TAPE BEGIN SENSOR LEVEL
RV3 TAPE END SENSOR LEVEL
END SENSOR TUNING
SL1
SL3
NTSC CCIR
SL1 OPEN SHORT
1 MICRO COMPUTER
2 MICRO COMPUTER
RESET
TC
EX
IRQ
VCC
VSS
DTA144EK
DTC144EK
R192 1M
X1
C34 22P
C33 22P
TP16
Q27 DTC144EK
REG +10.5V IN 6-6 PS, 10-1
EVER IN 6-5 PS, 11-5
UNREG 12V IN 6-9 PS, 10-4
UNREG 12V OUT 44-5 KY, 34-5
EVER 5V IN 6-7 PS, 10-2
EVER 5V OUT 44-8 KY, 34-8
UNSW 5V IN 6-8 PS, 10-3
UNSW 5V OUT 44-7 KY, 34-7
UNREG GND 6-10 PS, 10-5
UNREG GND 44-9 KY, 34-9
CTL RESET EN OUT 2/2
CPU RESET OUT 2/2
RESET IN 2/2
CAMERA RESET OUT 2/2
TAPE FWD/REV IN 2/2
L; RAM DATA IN 43-12 KY, 33-12
TT DATA 0 OUT 42-1 KY, 32-1
TT DATA 1 OUT 42-4 KY, 32-4
TT DATA 2 OUT 42-3 KY, 32-3
TT DATA 3 OUT 42-2 KY, 32-2
L; DATA SET STB IN 42-5 KY, 32-5
TC 1/2 VD IN 42-6 KY, 32-6
EXPD DATA 0 I/O 2/2
EXPD DATA 1 I/O 2/2
EXPD DATA 2 I/O 2/2
EXPD DATA 3 I/O 2/2
PROG I/O 2/2
CS A/B I/O 2/2
POWER CONT OUT 2/2
L; TENREG SW ON IN 52-2 SY-22, 62-11
1/2 VD IN 2/2
CAPSTAN SPEED 0 OUT 5-9 SV, 14-9
CAPSTAN SPEED 1 OUT 5-10 SV, 14-10
*MARKS ARE NOT MOUNTED
H; DRUM ROTATE IN 5-6 SV, 14-6
H; CAPSTAN ROTATE IN 5-5 SV, 14-5
H; CAPSTAN FWD IN 5-4 SV, 14-4
H; REEL STOP IN 5-3 SV, 14-3
H; SERVO LOCK IN 5-8 SV, 14-8
L; LINE VIDEO DET IN 21-1 VO, 3-1
L; CAMERA VIDEO DET IN 21-2 VO, 3-2
LINE/CAMERA IN 15-5 DU, 81-5
EXPD DATA 0 I/O 52-3 SY-22, 62-10
EXPD DATA 1 I/O 52-7 SY-22, 62-7
EXPD DATA 2 I/O 52-6 SY-22, 62-5
EXPD DATA 3 I/O 52-5 SY-22, 62-8
L; EXPD PROG OUT 52-4 SY-22, 62-9
EXPD CS A/B OUT 52-8 SY-22, 62-6
H; FWD COMMAND OUT 5-7 SV, 14-7
CAPSTAN FWD/REV OUT 2/2
CAPSTAN 2FG IN 2/2
L; PB OUT 2/2
H; FWD COMMAND OUT 2/2
EDIT CTL IN 2/2
L; SEARCH OUT 5-1 SV, 14-1
L; SEARCH OUT 53-1 SY-22, 63-5
3.58MHz OUT 44-2 KY, 34-2
3.58MHz OUT 51-5 SY-22, 61-8

CONTROL INPUT					OUTPUT
EN	INH	A	B	C	SC
0	0	0	0	0	S0
0	0	1	0	0	S1
0	0	0	1	0	S2
0	0	1	1	0	S3
0	0	0	0	1	S4
0	0	1	0	1	S5
0	0	0	1	1	S6
0	0	1	1	1	S7
0	1	X	X	X	GND
1	X	X	X	X	OPEN

SL3	
OPEN	REMOTE *
SHORT	REMOTE & VD-6800

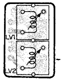
* VD-6800 are enable the STOP, EJECT buttons

SY-18 (1/2)

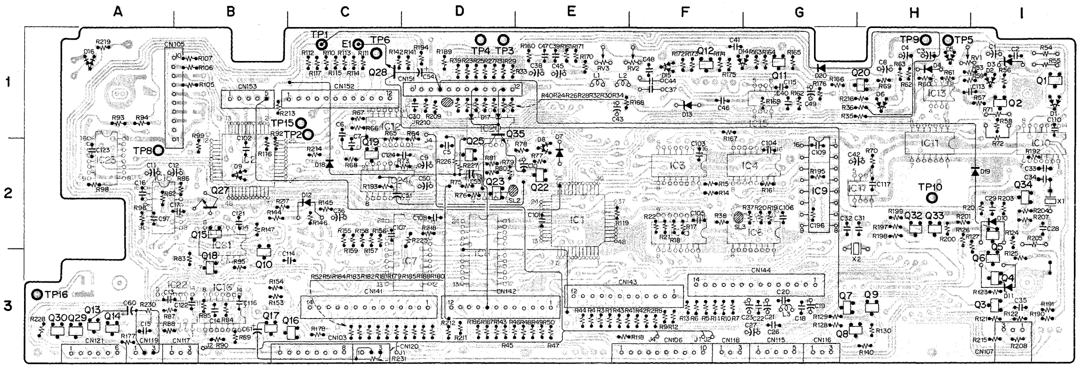
1-611-945-11, 12, 13, 14, 15
VD-6800··········SY-18
VD-6800PS········SY-18A

SY-18 (SYSTEM CONTROL)
DUS-33

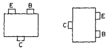
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)



DUS-33
-SOLDERING SIDE-
1-613-317-11
VO-6800


A
B
C
D
E
F
G
H
I
1
2
3
TP1
TP2
TP3
TP4
TP5
TP6
TP8
TP9
TP10
TP15
TP16
E1
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC15
IC16
IC17
IC18
IC21
IC22
IC23
CN103
CN105
CN106
CN107
CN115
CN116
CN117
CN119
CN120
CN121
CN141
CN142
CN143
CN144
CN151
CN152
CN153
X1
X2
L1
L2
L3
RV1
RV2
RV3

SY-18-SOLDERING SIDE-
1-611-945-11
VO-6800

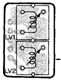


Ref.	Location
CN103	C - 3
CN105	B - 1
CN106	F - 3
CN107	I - 3
CN115	G - 3
CN116	G - 3
CN117	B - 3
CN118	F - 3
CN119	A - 3
CN120	C - 3
CN121	A - 3
CN141	C - 3
CN142	D - 3
CN143	E - 3
CN144	G - 3
CN151	D - 1
CN152	C - 1
CN153	B - 1
D1	I - 1
D2	I - 1
D3	I - 1
D4	H - 1
D5	H - 1
D6	H - 1
D7	E - 2
D8	E - 2
D9	B - 2
D10	I - 2
D11	I - 3
D12	C - 2
D13	F - 1
D14	F - 1
D15	F - 1
D16	A - 1
D17	D - 1
D18	C - 2
D19	I - 2
D20	G - 1
E1	C - 1
IC1	E - 2
IC2	B - 2
IC3	F - 2
IC4	G - 2
IC5	F - 2
IC6	G - 2
IC7	D - 3
IC8	D - 3
IC9	G - 2
IC10	I - 2
IC11	H - 2
IC12	C - 1
IC13	H - 1
IC15	G - 1
IC16	B - 3
IC17	H - 2
IC18	A - 2
IC20	D - 1
IC21	B - 2
IC22	A - 3
IC23	A - 2
IC24	C - 2
Q1	I - 1
Q2	I - 1
Q3	I - 3
Q4	I - 3
Q5	I - 2
Q6	I - 3
Q7	G - 3
Q8	G - 3
Q9	H - 3
Q10	B - 3
Q11	G - 1
Q12	F - 1
Q13	A - 3
Q14	A - 3
Q15	B - 2
Q16	C - 3
Q17	B - 3
Q18	B - 3
Q19	C - 2
Q20	H - 1
Q22	E - 2
Q23	D - 2
Q25	D - 2
Q27	B - 2
Q28	C - 1
Q29	A - 3
Q30	A - 3
Q32	H - 2
Q33	H - 2
Q34	I - 2
Q35	D - 1
RV1	H - 1
RV2	F - 1
RV3	E - 1
TP1	C - 1
TP2	C - 1
TP3	D - 1
TP4	D - 1
TP5	H - 1
TP6	C - 1
TP8	A - 2
TP9	H - 1
TP10	H - 2
TP15	C - 1
TP16	A - 3
X1	I - 2
X2	G - 2

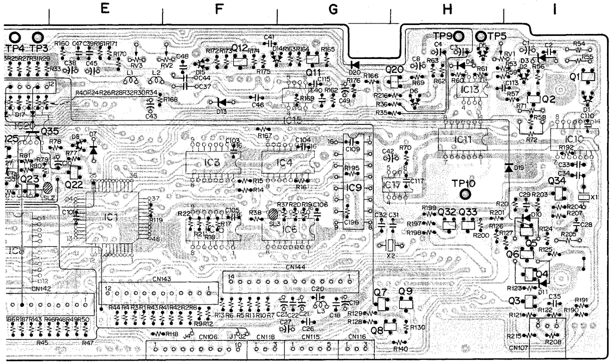
Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501-255M			18	42
IC 2	MB88501-256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201-173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M			8	4
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

IC14, not mount

DUS-5



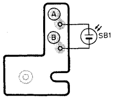
DUS-33
-SOLDERING SIDE-
1-613-317-11
VO-6800


E
F
G
H
I
TP4
TP3
TP9
TP5
TP10
Q35
Q23
Q22
Q12
Q11
Q20
Q1
Q2
Q34
Q32
Q33
Q5
Q6
Q4
Q3
Q7
Q9
Q8
IC1
IC3
IC4
IC5
IC6
IC9
IC10
IC11
IC13
IC15
IC17
L1
L2
L3
D13
D19
D20
SL2
SL3
X1
X2
CN142
CN143
CN144
CN106
CN118
CN115
CN116
CN107

SY-18 -SOLDERING SIDE-
1-611-945-11
VO-6800

Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501-255M			18	42
IC 2	MB88501-256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201-173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M			8	4
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

IC14, not mount

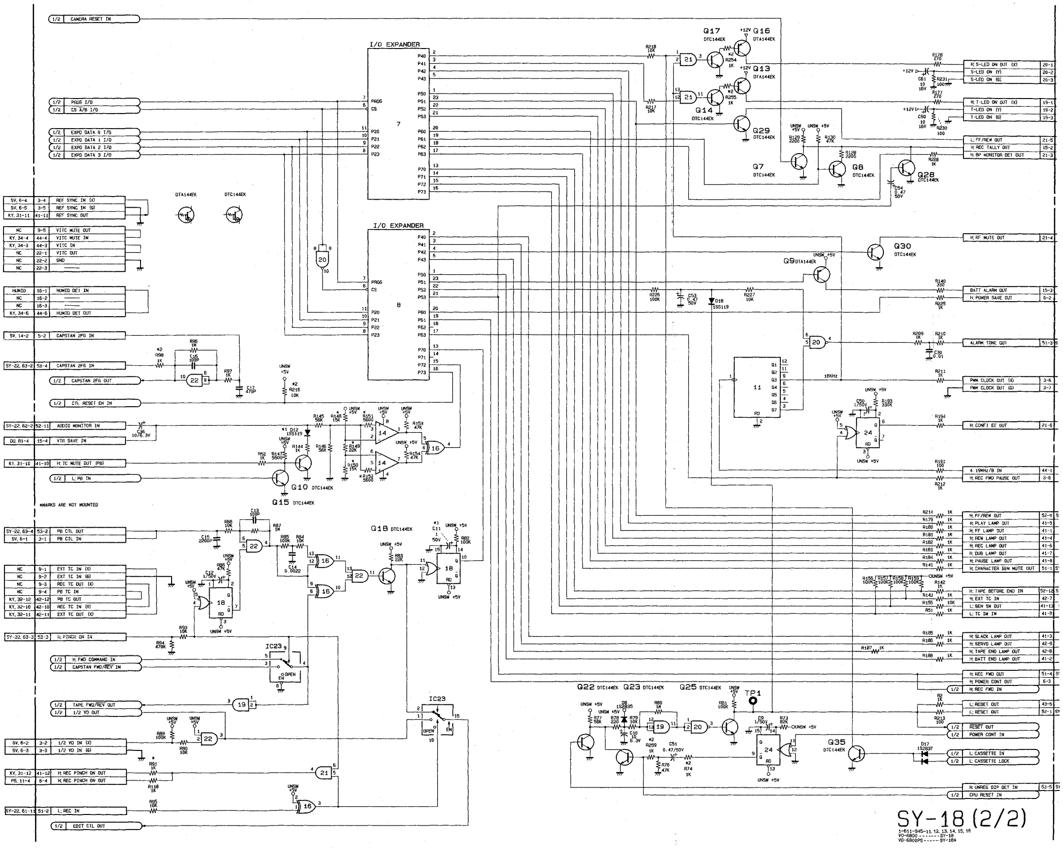


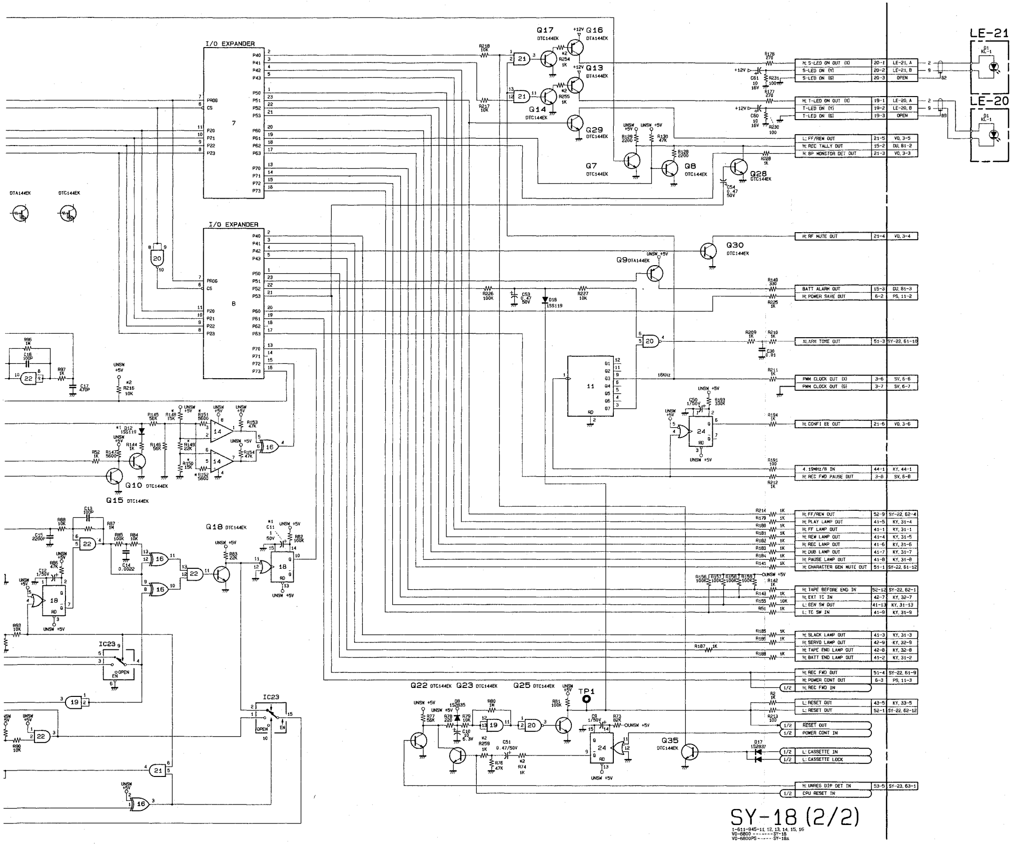
DUS-5
-SOLDERING SIDE-
1-611-964-11,12
VO-6800

SY-18 (2/2) (SYSTEM CONTROL)
DUS-33
LE-20
LE-21) (TAPE BEGIN/END DET)

NOTE;

MARK	CHANGE INFORMATION	SERIAL NO.
*1	C11 0.47/50V → 1/50V D12 1S1555 → 1SS119	UC; 11031 AND LATER J ; 10311 AND LATER EK; 11021 AND LATER
*2	R74 10K → 1K R98 1K ADDED R216 10K ADDED R254 R255) 1K ADDED R259	UC; 12781 AND LATER J ; 10561 AND LATER EK; 11971 AND LATER


1/2 CAMERA RESET IN
1/2 PROG I/O
1/2 CS A/B I/O
1/2 EXPD DATA 0 I/O
1/2 EXPD DATA 1 I/O
1/2 EXPD DATA 2 I/O
1/2 EXPD DATA 3 I/O
SV, 6-4 3-4 REF SYNC IN (X)
SV, 6-5 3-5 REF SYNC IN (G)
KY, 31-11 41-11 REF SYNC OUT
NC 9-5 VITC MUTE OUT
KY, 34-4 44-4 VITC MUTE IN
KY, 34-3 44-3 VITC IN
NC 22-1 VITC OUT
NC 22-2 GND
NC 22-3
HUMID 16-1 HUMID DET IN
NC 16-2
NC 16-3
KY, 34-6 44-6 HUMID DET OUT
SV, 14-2 5-2 CAPSTAN 2FG IN
SY-22, 63-2 53-4 CAPSTAN 2FG IN
1/2 CAPSTAN 2FG OUT
1/2 CTL RESET EN IN
SY-22, 62-2 52-11 AUDIO MONITOR IN
DU, 81-4 15-4 VTR SAVE IN
KY, 31-10 41-10 H; TC MUTE OUT (PB)
1/2 L; PB IN
*MARKS ARE NOT MOUNTED
SY-22, 63-4 53-2 PB CTL OUT
SV, 6-1 3-1 PB CTL IN
NC 9-1 EXT TC IN (X)
NC 9-2 EXT TC IN (G)
NC 9-3 REC TC OUT (X)
NC 9-4 PB TC IN
KY, 32-12 42-12 PB TC OUT
KY, 32-10 42-10 REC TC IN (X)
KY, 32-11 42-11 EXT TC OUT (X)
SY-22, 63-3 53-3 H; PINCH ON IN
1/2 H; FWD COMMAND IN
1/2 CAPSTAN FWD/REV IN
1/2 TAPE FWD/REV OUT
1/2 1/2 VD OUT
SV, 6-2 3-2 1/2 VD IN (X)
SV, 6-3 3-3 1/2 VD IN (G)
KY, 31-12 41-12 H; REC PINCH ON OUT
PS, 11-4 6-4 H; REC PINCH ON OUT
SY-22, 61-11 51-2 L; REC IN
1/2 EDIT CTL OUT
I/O EXPANDER
I/O EXPANDER
DTA144EK
DTC144EK
Q17
Q16
Q13
Q14
Q29
Q7
Q8
Q28
Q30
Q9
Q10
Q15
Q18
IC23
IC23
Q22
Q23
Q25
TP1
Q35
H; S-LED ON OUT (X) 20-1
S-LED ON (Y) 20-2
S-LED ON (G) 20-3
H; T-LED ON OUT (X) 19-1
T-LED ON (Y) 19-2
T-LED ON (G) 19-3
L; FF/REW OUT 21-5
H; REC TALLY OUT 15-2
H; BP MONITOR DET OUT 21-3
H; RF MUTE OUT 21-4
BATT ALARM OUT 15-3
H; POWER SAVE OUT 6-2
ALARM TONE OUT 51-3
PWM CLOCK OUT (X) 3-6
PWM CLOCK OUT (G) 3-7
H; CONFI EE OUT 21-6
4.19MHz/8 IN 44-1
H; REC FWD PAUSE OUT 3-8
H; FF/REW OUT 52-9
H; PLAY LAMP OUT 41-5
H; FF LAMP OUT 41-1
H; REW LAMP OUT 41-4
H; REC LAMP OUT 41-6
H; DUB LAMP OUT 41-7
H; PAUSE LAMP OUT 41-8
H; CHARACTER GEN MUTE OUT 51-1
H; TAPE BEFORE END IN 52-12
H; EXT TC IN 42-7
L; GEN SW OUT 41-13
L; TC SW IN 41-9
H; SLACK LAMP OUT 41-3
H; SERVO LAMP OUT 42-9
H; TAPE END LAMP OUT 42-8
H; BATT END LAMP OUT 41-2
H; REC FWD OUT 51-4
H; POWER CONT OUT 6-3
1/2 H; REC FWD IN
L; RESET OUT 43-6
L; RESET OUT 52-1
1/2 RESET OUT
1/2 POWER CONT IN
D17 1S2837
1/2 L; CASSETTE IN
1/2 L; CASSETTE LOCK
H; UNREG DIP DET IN 53-5
1/2 CPU RESET IN
SY-18 (2/2)
1-611-945-11, 12, 13, 14, 15, 16
VO-6800 -------SY-18
VO-6800PS------SY-18A

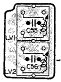

I/O EXPANDER
7
I/O EXPANDER
8
PROG
CS
P20
P21
P22
P23
P40
P41
P42
P43
P50
P51
P52
P53
P60
P61
P62
P63
P70
P71
P72
P73
Q17
Q16
Q13
Q14
Q29
Q7
Q8
Q28
Q30
Q9
Q15
Q10
Q18
Q22
Q23
Q25
Q35
TP1
IC23
OPEN
EN
DTA144EK
DTC144EK
UNSW +5V
+12V
16KHz
D12 1SS119
D16 1SS119
D17 1S2837
D8 1S2835
LE-21
LE-20
D1 KL-1
H; S-LED ON OUT (X) | 20-1 | LE-21, A
S-LED ON (Y) | 20-2 | LE-21, B
S-LED ON (G) | 20-3 | OPEN
H; T-LED ON OUT (X) | 19-1 | LE-20, A
T-LED ON (Y) | 19-2 | LE-20, B
T-LED ON (G) | 19-3 | OPEN
L; FF/REW OUT | 21-5 | VO, 3-5
H; REC TALLY OUT | 15-2 | DU, 81-2
H; 8P MONITOR DET OUT | 21-3 | VO, 3-3
H; RF MUTE OUT | 21-4 | VO, 3-4
BATT ALARM OUT | 15-3 | DU, 81-3
H; POWER SAVE OUT | 6-2 | PS, 11-2
ALARM TONE OUT | 51-3 | SY-22, 61-10
PWM CLOCK OUT (X) | 3-6 | SV, 6-6
PWM CLOCK OUT (G) | 3-7 | SV, 6-7
H; CONFI EE OUT | 21-6 | VO, 3-6
4.19MHz/8 IN | 44-1 | KY, 44-1
H; REC FWD PAUSE OUT | 3-8 | SV, 6-8
H; FF/REW OUT | 52-9 | SY-22, 62-4
H; PLAY LAMP OUT | 41-5 | KY, 31-4
H; FF LAMP OUT | 41-1 | KY, 31-1
H; REW LAMP OUT | 41-4 | KY, 31-5
H; REC LAMP OUT | 41-6 | KY, 31-6
H; DUB LAMP OUT | 41-7 | KY, 31-7
H; PAUSE LAMP OUT | 41-8 | KY, 31-8
H; CHARACTER GEN MUTE OUT | 51-1 | SY-22, 61-12
H; TAPE BEFORE END IN | 52-12 | SY-22, 62-1
H; EXT TC IN | 42-7 | KY, 32-7
L; GEN SW OUT | 41-13 | KY, 31-13
L; TC SW IN | 41-9 | KY, 31-9
H; SLACK LAMP OUT | 41-3 | KY, 31-3
H; SERVO LAMP OUT | 42-9 | KY, 32-9
H; TAPE END LAMP OUT | 42-8 | KY, 32-8
H; BATT END LAMP OUT | 41-2 | KY, 31-2
H; REC FWD OUT | 51-4 | SY-22, 61-9
H; POWER CONT OUT | 6-3 | PS, 11-3
1/2 H; REC FWD IN
L; RESET OUT | 43-5 | KY, 33-5
L; RESET OUT | 52-1 | SY-22, 62-12
1/2 RESET OUT
1/2 POWER CONT IN
1/2 L; CASSETTE IN
1/2 L; CASSETTE LOCK
H; UNREG DIP DET IN | 53-5 | SY-23, 63-1
1/2 CPU RESET IN

SY-18 (2/2)

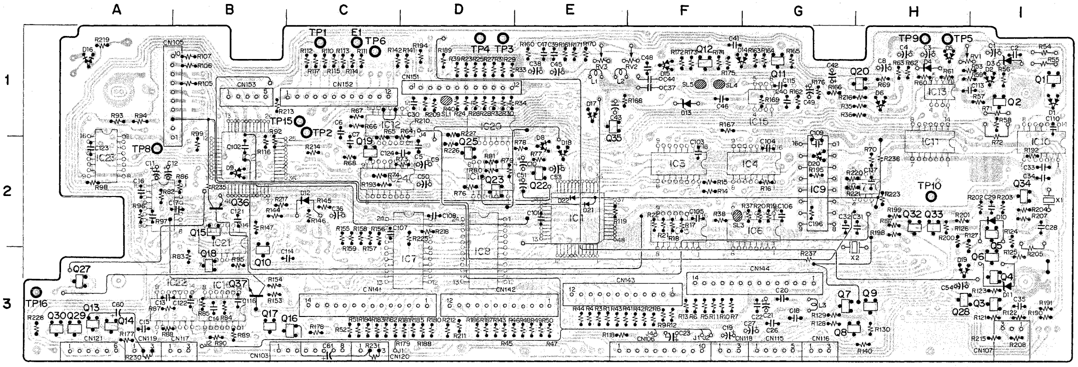
1-611-945-11, 12, 13, 14, 15, 16
VO-6800 --------SY-18
VO-6800PS ------SY-18A

SY-18 (SYSTEM CONTROL)
DUS-33

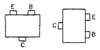
S/N 10031 TO 10630 (UC)
S/N 10011 TO 10260 (J)


LV1
C55
LV2
C56

DUS-33
-SOLDERING SIDE-
1-613-317-12
VO-6800


A
B
C
D
E
F
G
H
I
1
2
3
TP1
E1
TP6
TP4
TP3
TP9
TP5
TP15
TP2
TP8
TP10
TP16
IC1
IC3
IC4
IC6
IC7
IC8
IC9
IC11
IC13
IC15
IC20
IC21
IC22
IC23
IC24
CN103
CN105
CN106
CN107
CN115
CN116
CN117
CN118
CN119
CN120
CN121
CN141
CN142
CN143
CN144
CN151
CN152
CN153

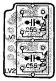
SY-18-SOLDERING SIDE-
1-611-945-12
VO-6800



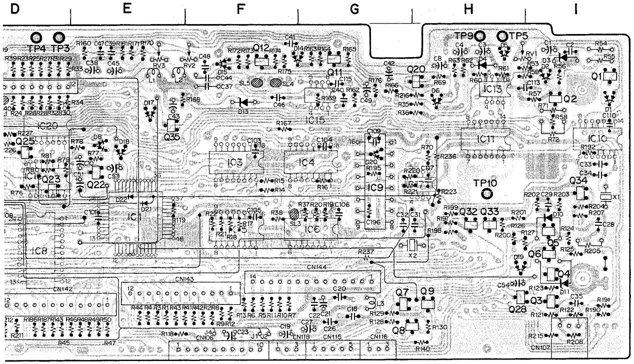
CN103	C - 3
CN105	B - 1
CN106	F - 3
CN107	I - 3
CN115	G - 3
CN116	G - 3
CN117	B - 3
CN118	F - 3
CN119	A - 3
CN120	C - 3
CN121	A - 3
CN141	C - 3
CN142	D - 3
CN143	E - 3
CN144	G - 3
CN151	D - 1
CN152	C - 1
CN153	B - 1
D1	I - 1
D2	I - 1
D3	I - 1
D4	H - 1
D5	H - 1
D6	H - 1
D8	E - 2
D9	B - 2
D10	I - 2
D11	I - 3
D12	C - 2
D13	F - 1
D14	F - 1
D15	F - 1
D16	A - 1
D17	E - 1
D18	E - 2
D19	H - 3
D20	G - 2
D21	E - 2
D22	E - 2
E1	C - 1
IC1	E - 2
IC2	B - 2
IC3	F - 2
IC4	G - 2
IC5	F - 2
IC6	G - 2
IC7	D - 3
IC8	D - 3
IC9	G - 2
IC10	I - 2
IC11	H - 2
IC12	C - 1
IC13	H - 1
IC15	G - 1
IC16	B - 3
IC17	H - 2
IC18	A - 2
IC19	D - 2
IC20	D - 1
IC21	B - 2
IC22	B - 3
IC23	A - 2
IC24	C - 2
Q1	I - 1
Q2	I - 1
Q3	I - 3
Q4	I - 3
Q5	I - 2
Q6	I - 3
Q7	G - 3
Q8	G - 3
Q9	H - 3
Q10	B - 3
Q11	G - 1
Q12	F - 1
Q13	A - 3
Q14	A - 3
Q15	B - 2
Q16	C - 3
Q17	B - 3
Q18	B - 3
Q19	C - 2
Q20	H - 1
Q22	E - 2
Q23	D - 2
Q25	D - 2
Q27	A - 3
Q28	H - 3
Q29	A - 3
Q30	A - 3
Q32	H - 2
Q33	H - 2
Q34	I - 2
Q35	E - 1
Q36	B - 2
Q37	B - 3
RV1	H - 1
RV2	F - 1
RV3	E - 1
TP1	C - 1
TP2	C - 1
TP3	D - 1
TP4	D - 1
TP5	H - 1
TP6	C - 1
TP8	A - 2
TP9	H - 1
TP10	H - 2
TP15	C - 1
TP16	A - 3
X1	I - 2
X2	G - 3

Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501-255M			18	42
IC 2	MB88501-256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201-173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M			8	4
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

IC14, not mount


LV1
C55
LV2
C56

DUS-33
-SOLDERING SIDE-
1-613-317-12
VO-6800


D
E
F
G
H
I
TP4
TP3
TP9
TP5
TP10
IC1
IC3
IC4
IC6
IC8
IC9
IC10
IC11
IC13
IC15
IC20
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q11
Q12
Q20
Q22
Q23
Q25
Q28
Q32
Q33
Q34
Q35
X1
X2
CN107
CN115
CN116
CN119
CN142
CN143
CN144

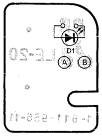
SY-18-SOLDERING SIDE-
1-611-945-12
VO-6800

TP1	C - 1
TP2	C - 1
TP3	D - 1
TP4	D - 1
TP5	H - 1
TP6	C - 1
TP8	A - 2
TP9	H - 1
TP10	H - 2
TP15	C - 1
TP16	A - 3
X1	I - 2
X2	G - 3

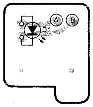
Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501-255M			18	42
IC 2	MB88501-256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201-173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M			8	4
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

IC14, not mount

LE-20 LE-21) (TAPE BEGIN/END DET)



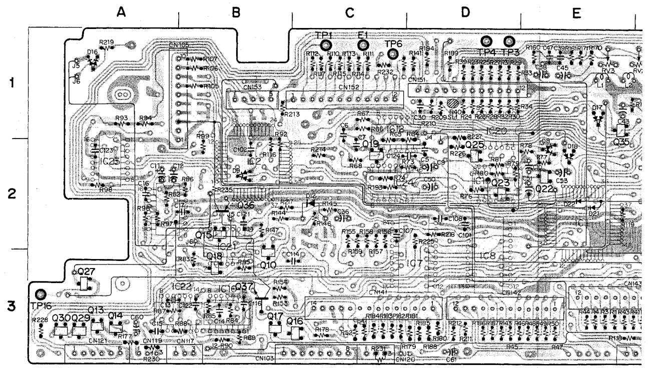
LE-20
-SOLDERING SIDE-
1-611-956-11,12
VO-6800

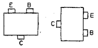


LE-21
-SOLDERING SIDE-
1-611-957-11,12
VO-6800

SY-18 (SYSTEM CONTROL)
DUS-33

S/N 10631 TO 12780 (UC)
S/N 10261 TO 10560 (J)

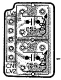

A
B
C
D
E
1
2
3
TP1
E1
TP6
TP4
TP3
TP16
CN105
CN153
CN152
CN151
CN141
CN142
CN143
CN121
CN119
CN117
CN103
CN120
IC2
IC7
IC8
IC11
IC12
IC16
IC20
IC22
IC23
Q10
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q22
Q23
Q25
Q27
Q29
Q30
Q35
Q36
Q37
D16
D17
D18
D21
D22
RV3
L1
L2



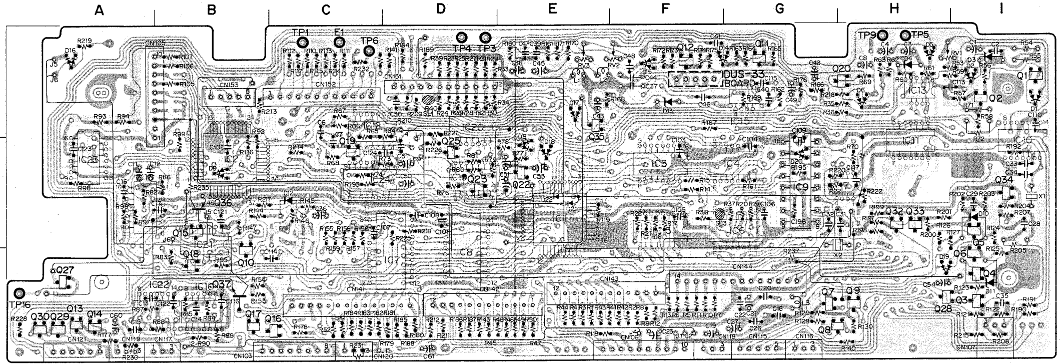
CN103	C - 3	D1	I - 1	IC1	E - 2	Q1	I - 1	Q28	H - 3	TP1	C - 1
CN105	B - 1	D2	I - 1	IC2	B - 2	Q2	I - 1	Q29	A - 3	TP3	D - 1
CN106	F - 3	D3	I - 1	IC3	F - 2	Q3	I - 3	Q30	A - 3	TP4	D - 1
CN107	I - 3	D4	H - 1	IC4	G - 2	Q4	I - 3	Q32	H - 2	TP5	H - 1
CN115	G - 3	D5	H - 1	IC5	F - 2	Q5	I - 2	Q33	H - 2	TP6	C - 1
CN116	G - 3	D6	H - 1	IC6	G - 2	Q6	I - 3	Q34	I - 2	TP9	H - 1
CN117	B - 3	D8	E - 2	IC7	D - 3	Q7	G - 3	Q35	E - 1	TP16	A - 3
CN118	F - 3	D9	B - 2	IC8	D - 3	Q8	G - 3	Q36	B - 2		
CN119	A - 3	D10	I - 2	IC9	G - 2	Q9	H - 3	Q37	B - 3	X1	I - 2
CN120	C - 3	D11	I - 3	IC10	I - 2	Q10	B - 3			X2	G - 3
CN121	A - 3	D12	C - 2	IC11	H - 2	Q11	G - 1	RV1	H - 1		
CN141	C - 3	D13	F - 1	IC12	C - 1	Q12	F - 1	RV2	F - 1		
CN142	D - 3	D14	F - 1	IC13	H - 1	Q13	A - 3	RV3	E - 1		
CN143	E - 3	D15	F - 1	IC15	G - 1	Q14	A - 3				
CN144	G - 3	D16	A - 1	IC16	B - 3	Q15	B - 2				
CN151	D - 1	D17	E - 1	IC17	H - 2	Q16	C - 3				
CN152	C - 1	D18	E - 2	IC18	A - 2	Q17	B - 3				
CN153	B - 1	D19	H - 3	IC19	D - 2	Q18	B - 3				
		D20	G - 2	IC20	D - 1	Q19	C - 2				
		D21	E - 2	IC21	B - 2	Q20	H - 1				
		D22	E - 2	IC22	B - 3	Q22	E - 2				
				IC23	A - 2	Q23	D - 2				
		E1	C - 1	IC24	C - 2	Q25	D - 2				
						Q27	A - 3				

SY-18 (SYSTEM CONTROL)
DUS-33

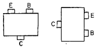
S/N 10631 TO 12780 (UC)
S/N 10261 TO 10560 (J)



DUS-33 -SOLDERING SIDE-
1-613-317-12
VO-6800
VO-6800PS


A
B
C
D
E
F
G
H
I
1
2
3
TP1
E1
TP6
TP4
TP3
TP9
TP5
TP16
DUS-33 BOARD
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC15
IC16
IC18
IC19
IC20
IC22
IC23
CN103
CN105
CN106
CN107
CN115
CN116
CN117
CN118
CN119
CN120
CN121
CN141
CN142
CN143
CN144
CN151
CN152
CN153
X1
X2

SY-18 -SOLDERING SIDE-
1-611-945-14
VO-6800 ------ SY-18
VO-6800PS ----- SY-18A



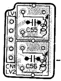
CN103	C - 3	D1	I - 1	IC1	E - 2	Q1	I - 1	Q28	H - 3	TP1	C - 1
CN105	B - 1	D2	I - 1	IC2	B - 2	Q2	I - 1	Q29	A - 3	TP3	D - 1
CN106	F - 3	D3	I - 1	IC3	F - 2	Q3	I - 3	Q30	A - 3	TP4	D - 1
CN107	I - 3	D4	H - 1	IC4	G - 2	Q4	I - 3	Q32	H - 2	TP5	H - 1
CN115	G - 3	D5	H - 1	IC5	F - 2	Q5	I - 2	Q33	H - 2	TP6	C - 1
CN116	G - 3	D6	H - 1	IC6	G - 2	Q6	I - 3	Q34	I - 2	TP9	H - 1
CN117	B - 3	D8	E - 2	IC7	D - 3	Q7	G - 3	Q35	E - 1	TP16	A - 3
CN118	F - 3	D9	B - 2	IC8	D - 3	Q8	G - 3	Q36	B - 2		
CN119	A - 3	D10	I - 2	IC9	G - 2	Q9	H - 3	Q37	B - 3	X1	I - 2
CN120	C - 3	D11	I - 3	IC10	I - 2	Q10	B - 3			X2	G - 3
CN121	A - 3	D12	C - 2	IC11	H - 2	Q11	G - 1	RV1	H - 1		
CN141	C - 3	D13	F - 1	IC12	C - 1	Q12	F - 1	RV2	F - 1		
CN142	D - 3	D14	F - 1	IC13	H - 1	Q13	A - 3	RV3	E - 1		
CN143	E - 3	D15	F - 1	IC15	G - 1	Q14	A - 3				
CN144	G - 3	D16	A - 1	IC16	B - 3	Q15	B - 2				
CN151	D - 1	D17	E - 1	IC17	H - 2	Q16	C - 3				
CN152	C - 1	D18	E - 2	IC18	A - 2	Q17	B - 3				
CN153	B - 1	D19	H - 3	IC19	D - 2	Q18	B - 3				
		D20	G - 2	IC20	D - 1	Q19	C - 2				
		D21	E - 2	IC21	B - 2	Q20	H - 1				
		D22	E - 2	IC22	B - 3	Q22	E - 2				
				IC23	A - 2	Q23	D - 2				
		E1	C - 1	IC24	C - 2	Q25	D - 2				
						Q27	A - 3				

Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501-255M			18	42
IC 2	MB88501-256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201-173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M				
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

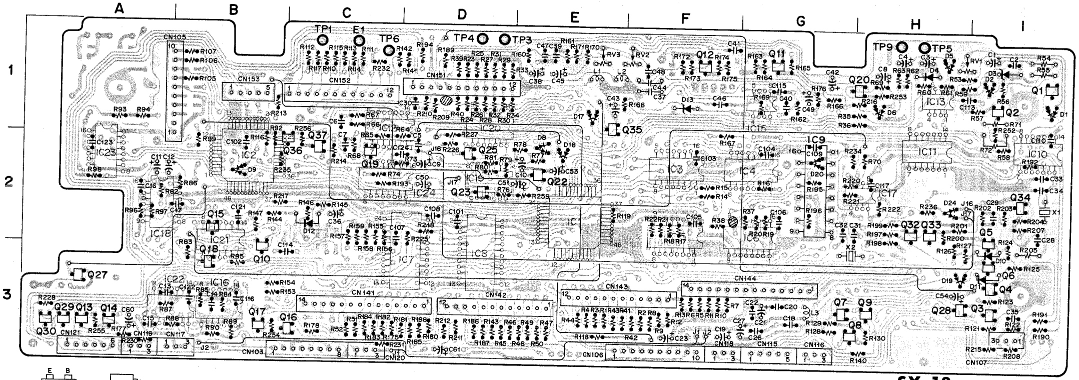
IC14, not mount

SY-18 (SYSTEM CONTROL)
DUS-33

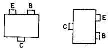
S/N 12781 TO 16680 (UC)
S/N 10561 TO 11560 (J)


LV1
C55
C56
CN1
LV2

DUS-33
-SOLDERING SIDE-
1-613-317-12
VO-6800
VO-6800PS


A
B
C
D
E
F
G
H
I
1
2
3
TP1
E1
TP6
TP4
TP3
TP9
TP5
CN105
CN153
CN152
CN151
CN141
CN142
CN143
CN144
CN121
CN119
CN117
CN103
CN120
CN106
CN118
CN115
CN116
CN107
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q22
Q23
Q25
Q27
Q28
Q29
Q30
Q32
Q33
Q34
Q35
Q36
Q37
RV1
RV2
RV3
X1
X2
L1
L2
L3
J2

SY-18 - SOLDERING SIDE -
1-611-945-15
VO-6800 ········ SY-18
VO-6800PS ····· SY-18A



CN103	C - 3
CN105	B - 1
CN106	F - 3
CN107	I - 3
CN115	G - 3
CN116	G - 3
CN117	B - 3
CN118	F - 3
CN119	A - 3
CN120	C - 3
CN121	A - 3
CN141	C - 3
CN142	D - 3
CN143	E - 3
CN144	G - 3
CN151	D - 1
CN152	C - 1
CN153	B - 1

D1	I - 1
D2	I - 1
D3	I - 1
D4	H - 1
D5	H - 1
D6	H - 1
D8	E - 2
D9	B - 2
D10	I - 2
D11	I - 3
D12	C - 2
D13	F - 1
D17	E - 1
D18	E - 2
D19	H - 3
D20	G - 2
D24	H - 2
E1	C - 1

IC1	E - 2
IC2	B - 2
IC3	F - 2
IC4	G - 2
IC5	F - 2
IC6	G - 2
IC7	D - 3
IC8	D - 3
IC9	G - 2
IC10	I - 2
IC11	H - 2
IC12	C - 1
IC13	H - 1
IC15	G - 1
IC16	B - 3
IC17	H - 2
IC18	A - 2
IC19	D - 2
IC20	D - 1
IC21	B - 2
IC22	B - 3
IC23	A - 2
IC24	C - 2

Q1	I - 1
Q2	I - 1
Q3	I - 3
Q4	I - 3
Q5	I - 2
Q6	I - 3
Q7	G - 3
Q8	G - 3
Q9	H - 3
Q10	B - 3
Q11	G - 1
Q12	F - 1
Q13	A - 3
Q14	A - 3
Q15	B - 2
Q16	C - 3
Q17	B - 3
Q18	B - 3
Q19	C - 2
Q20	H - 1
Q22	E - 2
Q23	D - 2
Q25	D - 2

Q27	A - 3
Q28	H - 3
Q29	A - 3
Q30	A - 3
Q32	H - 2
Q33	H - 2
Q34	I - 2
Q35	E - 1
Q36	B - 2
Q37	C - 2
RV1	H - 1
RV2	F - 1
RV3	E - 1

TP1	C - 1
TP3	D - 1
TP4	D - 1
TP5	H - 1
TP6	C - 1
TP9	H - 1
X1	I - 2
X2	G - 3

Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501 - 255M			18	42
IC 2	MB88501 - 256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201 - 173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M				
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

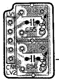
IC14, not mount

SY-18
DUS-3

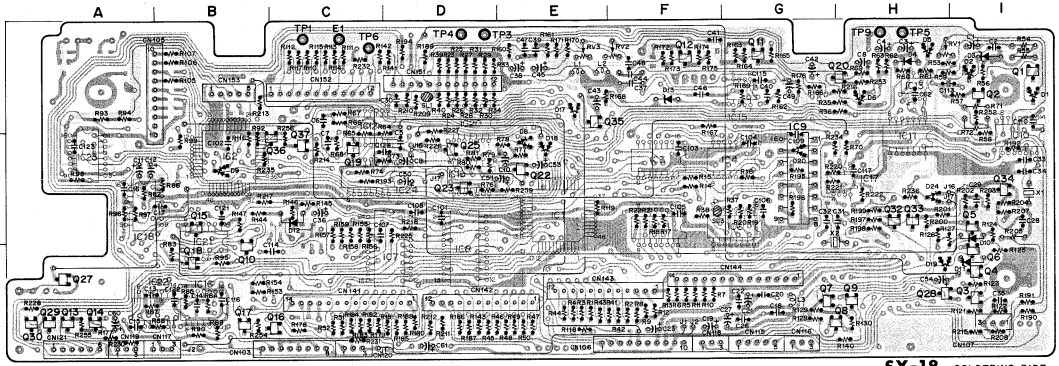
S/N
S/N

SY-18 (SYSTEM CONTROL)
DUS-33

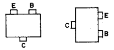
S/N 17731 AND LATER (UC)
S/N 11561 AND LATER (J)


LV1
C55
C56
CN
LV2

DUS-33
-SOLDERING SIDE-
1-613-317-12
VO-6800
VO-6800PS


A
B
C
D
E
F
G
H
I
1
2
3
TP1
E1
TP6
TP4
TP3
TP9
TP5
CN105
CN153
CN152
CN151
CN141
CN142
CN143
CN144
CN103
CN106
CN107
CN115
CN116
CN117
CN118
CN119
CN120
CN121
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
RV1
RV2
RV3
X1
X2
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q22
Q23
Q25
Q27
Q28
Q29
Q30
Q32
Q33
Q34
Q35
Q36
Q37

SY-18 -SOLDERING SIDE-
1-611-945-16
VO-6800 -------SY-18
VO-6800PS-----SY-18A



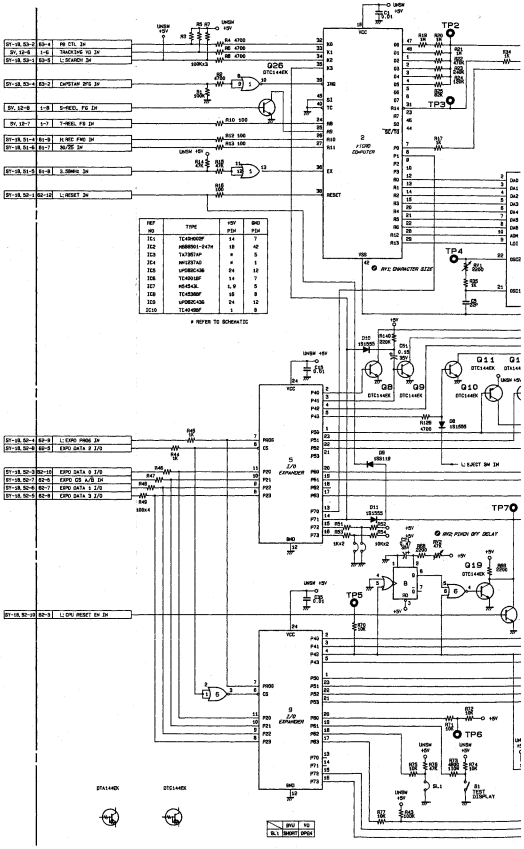
CN103	C - 3	D1	I - 1	IC1	E - 2	Q1	I - 1	Q27	A - 3	TP1	C - 1
CN105	B - 1	D2	I - 1	IC2	B - 2	Q2	I - 1	Q28	H - 3	TP3	D - 1
CN106	F - 3	D3	I - 1	IC3	F - 2	Q3	I - 3	Q29	A - 3	TP4	D - 1
CN107	I - 3	D4	H - 1	IC4	G - 2	Q4	I - 3	Q30	A - 3	TP5	H - 1
CN115	G - 3	D5	H - 1	IC5	F - 2	Q5	I - 2	Q32	H - 2	TP6	C - 1
CN116	G - 3	D6	H - 1	IC6	G - 2	Q6	I - 3	Q33	H - 2	TP9	H - 1
CN117	B - 3	D8	E - 2	IC7	D - 3	Q7	G - 3	Q34	I - 2		
CN118	F - 3	D9	B - 2	IC8	D - 3	Q8	G - 3	Q35	E - 1	X1	I - 2
CN119	A - 3	D10	I - 2	IC9	G - 2	Q9	H - 3	Q36	B - 2	X2	G - 3
CN120	C - 3	D11	I - 3	IC10	I - 2	Q10	B - 3	Q37	C - 2		
CN121	A - 3	D12	C - 2	IC11	H - 2	Q11	G - 1				
CN141	C - 3	D13	F - 1	IC12	C - 1	Q12	F - 1	RV1	H - 1		
CN142	D - 3	D17	E - 1	IC13	H - 1	Q13	A - 3	RV2	F - 1		
CN143	E - 3	D18	E - 2	IC15	G - 1	Q14	A - 3	RV3	E - 1		
CN144	G - 3	D19	H - 3	IC16	B - 3	Q15	B - 2				
CN151	D - 1	D20	G - 2	IC17	H - 2	Q16	C - 3				
CN152	C - 1	D24	H - 2	IC18	A - 2	Q17	B - 3				
CN153	B - 1			IC19	D - 2	Q18	B - 3				
		E1	C - 1	IC20	D - 1	Q19	C - 2				
				IC21	B - 2	Q20	H - 1				
				IC22	B - 3	Q22	E - 2				
				IC23	A - 2	Q23	D - 2				
				IC24	C - 2	Q25	D - 2				

Ref. No.	Type	Pin No.			
		+12V	+6V	+5V	GND
IC 1	MB88501-255M			18	42
IC 2	MB88501-256M			18	42
IC 3	TC4512BF			16	8
IC 4	TC4512BF			16	8
IC 5	TC4512BF			16	8
IC 6	TC4512BF			16	8
IC 7	μPD82C43G			24	12
IC 8	μPD82C43G			24	12
IC 9	MB88201-173N			16	8
IC 10	TC40H000F			14	7
IC 11	TC4024BF			14	7
IC 12	TC4011BF		14		7
IC 13	NJM4558M	8			4
IC 14	NJM2903M				
IC 15	NJM4560M			8	4
IC 16	TC4030BF			14	7
IC 17	NJM2903M	8			4
IC 18	TC4538BF			16	8
IC 19	TC4081BF			14	7
IC 20	TC4011BF			14	7
IC 21	TC4081BF			14	7
IC 22	TC4081BF			14	7
IC 23	TC4053BF			16	8
IC 24	TC4538BF			16	8

IC14, not mount

SY-22 (SYSTEM CONTROL)
DUS-4 (TENREG SW)

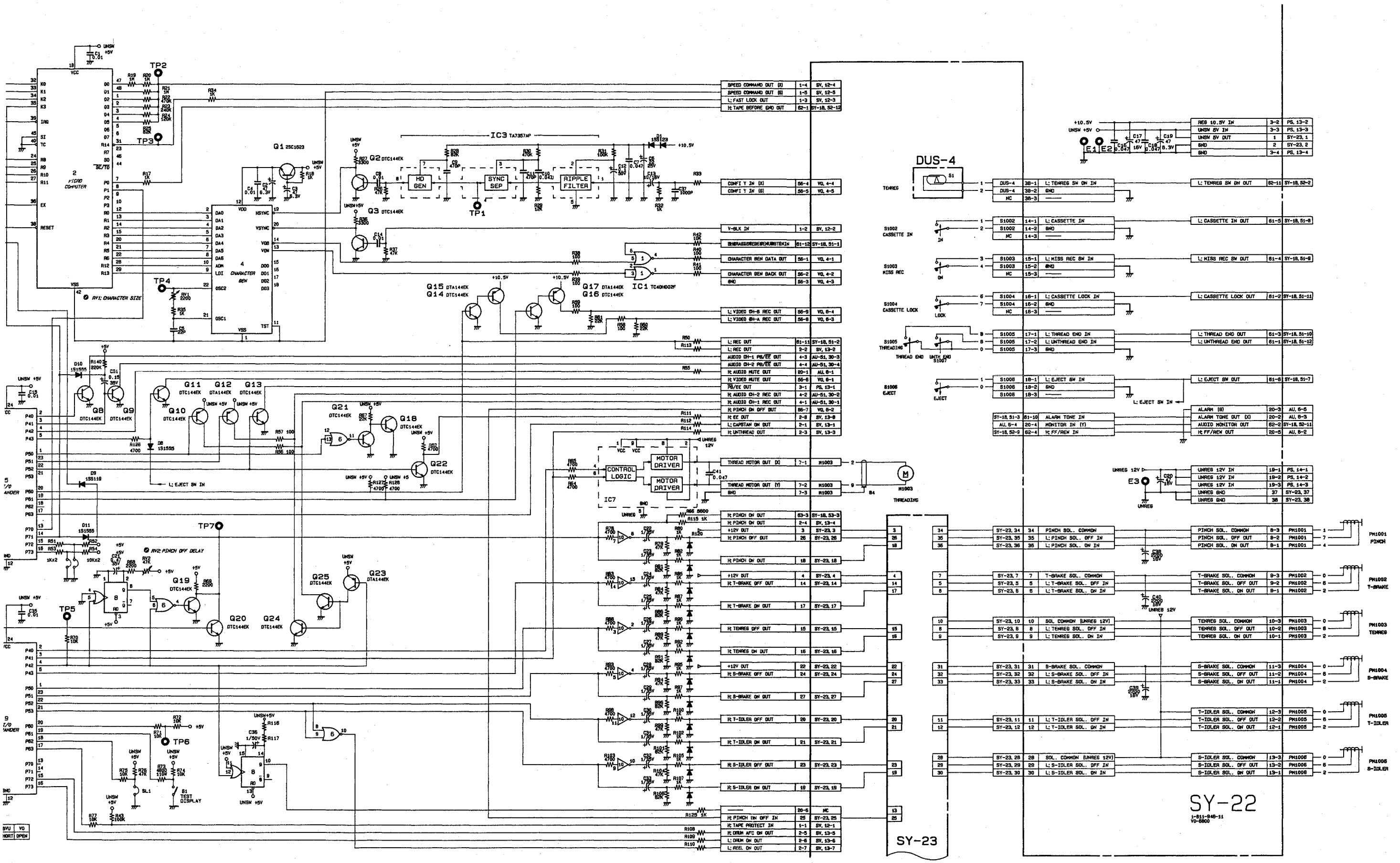
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


SY-18, 53-2 | 63-4 | PB CTL IN
SV, 12-6 | 1-6 | TRACKING VD IN
SY-18, 53-1 | 63-5 | L; SEARCH IN
SY-18, 53-4 | 63-2 | CAPSTAN 2FG IN
SV, 12-8 | 1-8 | S-REEL FG IN
SV, 12-7 | 1-7 | T-REEL FG IN
SY-18, 51-4 | 61-9 | H; REC FMD IN
SY-18, 51-6 | 61-7 | 30/25 IN
SY-18, 51-5 | 61-8 | 3.58MHz IN
SY-18, 52-1 | 62-12 | L; RESET IN
SY-18, 52-4 | 62-9 | L; EXPD PROG IN
SY-18, 52-8 | 62-5 | EXPD DATA 2 I/O
SY-18, 52-3 | 62-10 | EXPD DATA 0 I/O
SY-18, 52-7 | 62-6 | EXPD CS A/B IN
SY-18, 52-6 | 62-7 | EXPD DATA 1 I/O
SY-18, 52-5 | 62-8 | EXPD DATA 3 I/O
SY-18, 52-10 | 62-3 | L; CPU RESET EN IN
UNSW +5V
2 MICRO COMPUTER
5 I/O EXPANDER
9 I/O EXPANDER
Q26 DTC144EK
Q8 DTC144EK
Q9 DTC144EK
Q10 DTC144EK
Q11 DTC144EK
Q19 DTC144EK
TP2
TP3
TP4
TP5
TP6
TP7
RV1: CHARACTER SIZE
RV2: PINCH OFF DELAY
L: EJECT SW IN
S1 TEST DISPLAY
SL1
DTA144EK
DTC144EK

REF NO	TYPE	+5V PIN	GND PIN
IC1	TC40H002F	14	7
IC2	M888501-247M	18	42
IC3	TA7357AP	*	5
IC4	MN1237AD	*	1
IC5	uPD82C436	24	12
IC6	TC40018F	14	7
IC7	M54543L	1, 9	5
IC8	TC45388F	16	8
IC9	uPD82C436	24	12
IC10	TC40498F	1	8

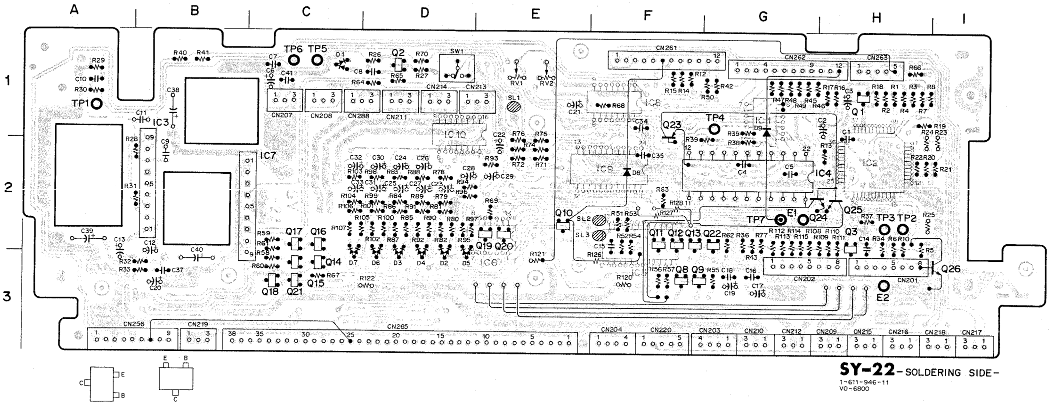
* REFER TO SCHEMATIC

	BVU	VO
SL1	SHORT	OPEN


TP2
TP3
TP4
TP5
TP6
TP7
TP1
2 MICRO COMPUTER
4 CHARACTER GEN
Q1 2SC1623
Q2 DTC144EK
Q3 DTC144EK
IC3 TA7357AP
HD GEN
SYNC SEP
RIPPLE FILTER
IC1 TC4OH002F
Q15 DTA144EK
Q14 DTC144EK
Q17 DTA144EK
Q16 DTC144EK
Q8
Q9
Q10
Q11
Q12
Q13
Q21
Q18
Q22
Q19
Q20
Q23
Q24
Q25
CONTROL LOGIC
MOTOR DRIVER
MOTOR DRIVER
IC7
RV1: CHARACTER SIZE
RV2: PINCH OFF DELAY
DUS-4
TENREG
S1002 CASSETTE IN
S1003 MISS REC
S1004 CASSETTE LOCK
S1005 THREADING
S1006 EJECT
M1003 THREADING
E1
E2
E3
SY-23
SY-22
PM1001 PINCH
PM1002 T-BRAKE
PM1003 TENREG
PM1004 S-BRAKE
PM1005 T-IDLER
PM1006 S-IDLER
S1 TEST DISPLAY
SL1
1-611-946-11
VO-5800

SY-22 (SYSTEM CONTROL)

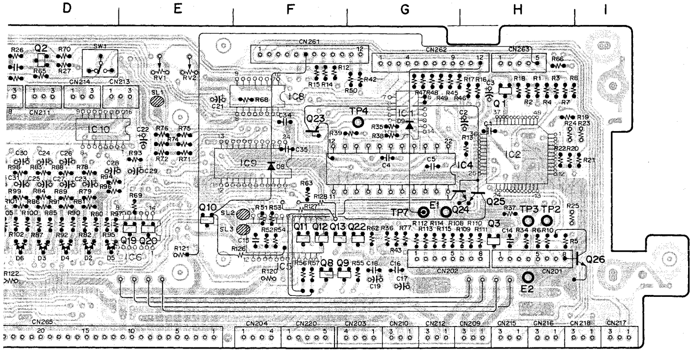
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


A
B
C
D
E
F
G
H
I
1
2
3
TP1
TP2
TP3
TP4
TP5
TP6
TP7
IC3
IC7
IC10
IC9
IC4
IC2
Q26
E1
E2
SW1
RV1
RV2
CN256
CN219
CN265
CN204
CN220
CN203
CN210
CN212
CN209
CN215
CN216
CN218
CN217
CN261
CN262
CN263
CN201
CN202
SY-22 -SOLDERING SIDE-
1-611-946-11
VO-6800
E
B
C

CN201	H - 3	D1	C - 1	Q1	H - 1	RV1	E - 1
CN202	G - 3	D2	D - 3	Q2	D - 1	RV2	E - 1
CN203	G - 3	D3	D - 3	Q3	H - 2		
CN204	F - 3	D4	D - 3	Q8	F - 3	SW	D - 1
CN207	C - 1	D5	D - 3	Q9	F - 3		
CN208	C - 1	D6	D - 3	Q10	F - 3	TP1	A - 1
CN209	H - 3	D7	C - 3	Q11	F - 2	TP2	H - 2
CN210	G - 3	D8	F - 2	Q12	F - 2	TP3	H - 3
CN211	D - 1	D9	H - 1	Q13	F - 2	TP4	G - 1
CN212	G - 3			Q14	C - 3	TP5	C - 1
CN213	E - 1	E1	G - 2	Q15	C - 3	TP6	C - 1
CN214	D - 1	E2	H - 3	Q16	C - 2	TP7	G - 2
CN215	H - 3			Q17	C - 2		
CN216	H - 3	IC1	G - 1	Q18	C - 3		
CN217	I - 3	IC2	H - 2	Q19	E - 2		
CN218	I - 3	IC3	B - 2	Q20	E - 2		
CN219	B - 3	IC4	G - 2	Q21	C - 3		
CN220	F - 3	IC5	F - 2	Q22	G - 2		
CN256	A - 3	IC6	E - 2	Q23	F - 2		
CN261	F - 1	IC7	C - 2	Q24	H - 2		
CN262	G - 1	IC8	F - 1	Q25	H - 2		
CN263	H - 1	IC9	F - 2	Q26	I - 3		
CN265	D - 3	IC10	D - 1				
CN288	D - 1						

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501 - 247M	18	42
IC 3	TA7357AP	✱	5
IC 4	MN1237AD	✱	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC10	TC4049BF	1	8

✱ REFER TO SCHEMATIC

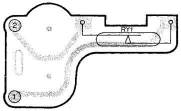

D
E
F
G
H
I
CN261
CN262
CN263
CN211
CN214
CN213
CN265
CN204
CN220
CN203
CN210
CN212
CN209
CN215
CN216
CN218
CN217
CN202
CN201
IC10
IC9
IC8
IC6
IC4
IC2
IC1
IC5
Q1
Q2
Q3
Q8
Q9
Q10
Q11
Q12
Q13
Q19
Q20
Q22
Q23
Q24
Q25
Q26
TP2
TP3
TP4
TP7
E1
E2
SW1
RV1
RV2
SL1
SL2
SL3
D2
D3
D4
D5
D6
D8
D9

SY-22-SOLDERING SIDE-
1-611-946-11
VO-6800

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501-247M	18	42
IC 3	TA7357AP	*	5
IC 4	MN1237AD	*	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC10	TC4049BF	1	8

* REFER TO SCHEMATIC

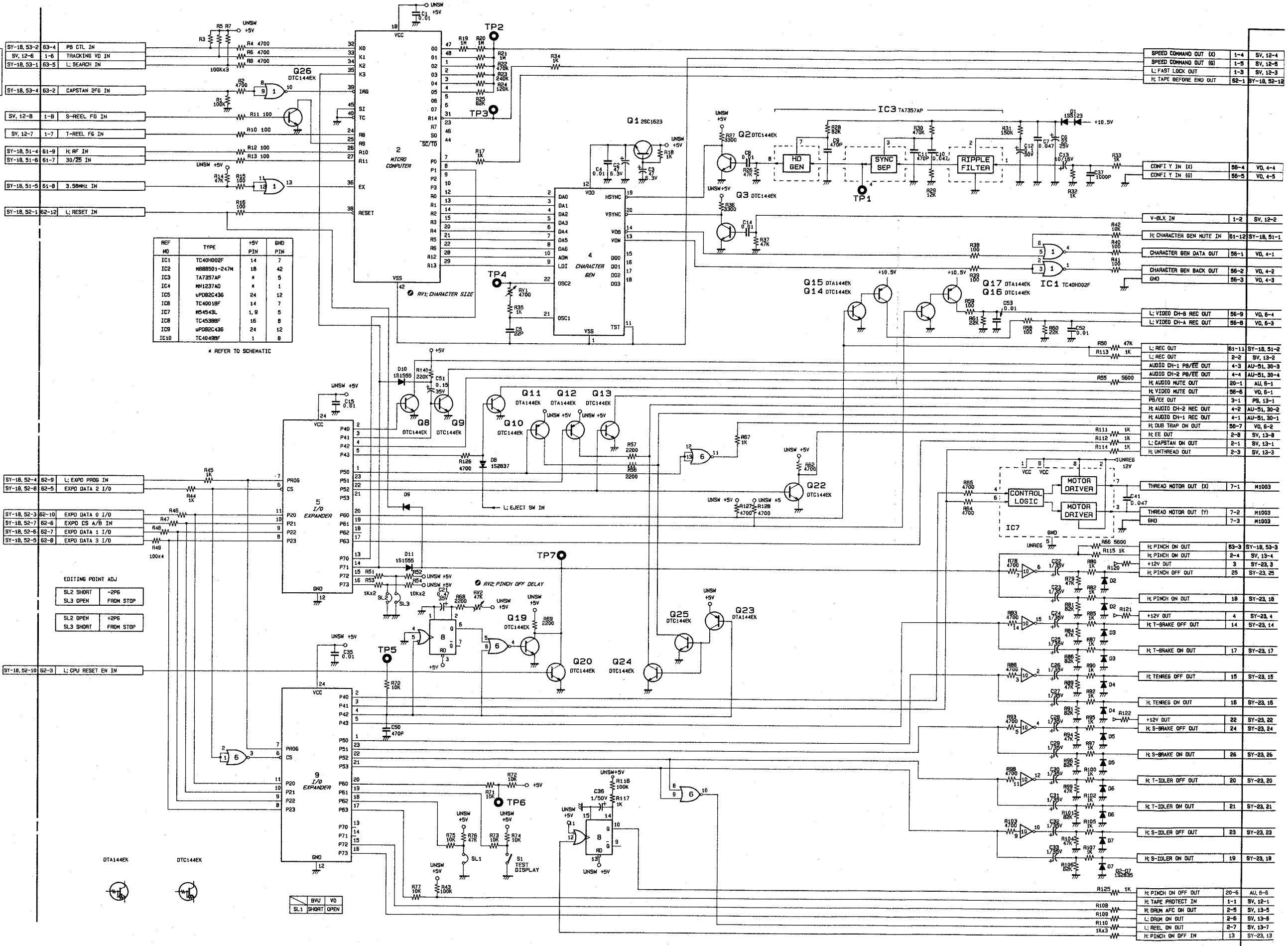
DUS-4 (TENREG SW)



DUS-4 -SOLDERING SIDE-
1-611-963-11,12
VO-6800

SY-22 (SYSTEM CONTROL)
DUS-4 (TENREG SW)

S/N 10031 TO 10330 (UC)
S/N 10011 TO 10110 (J)

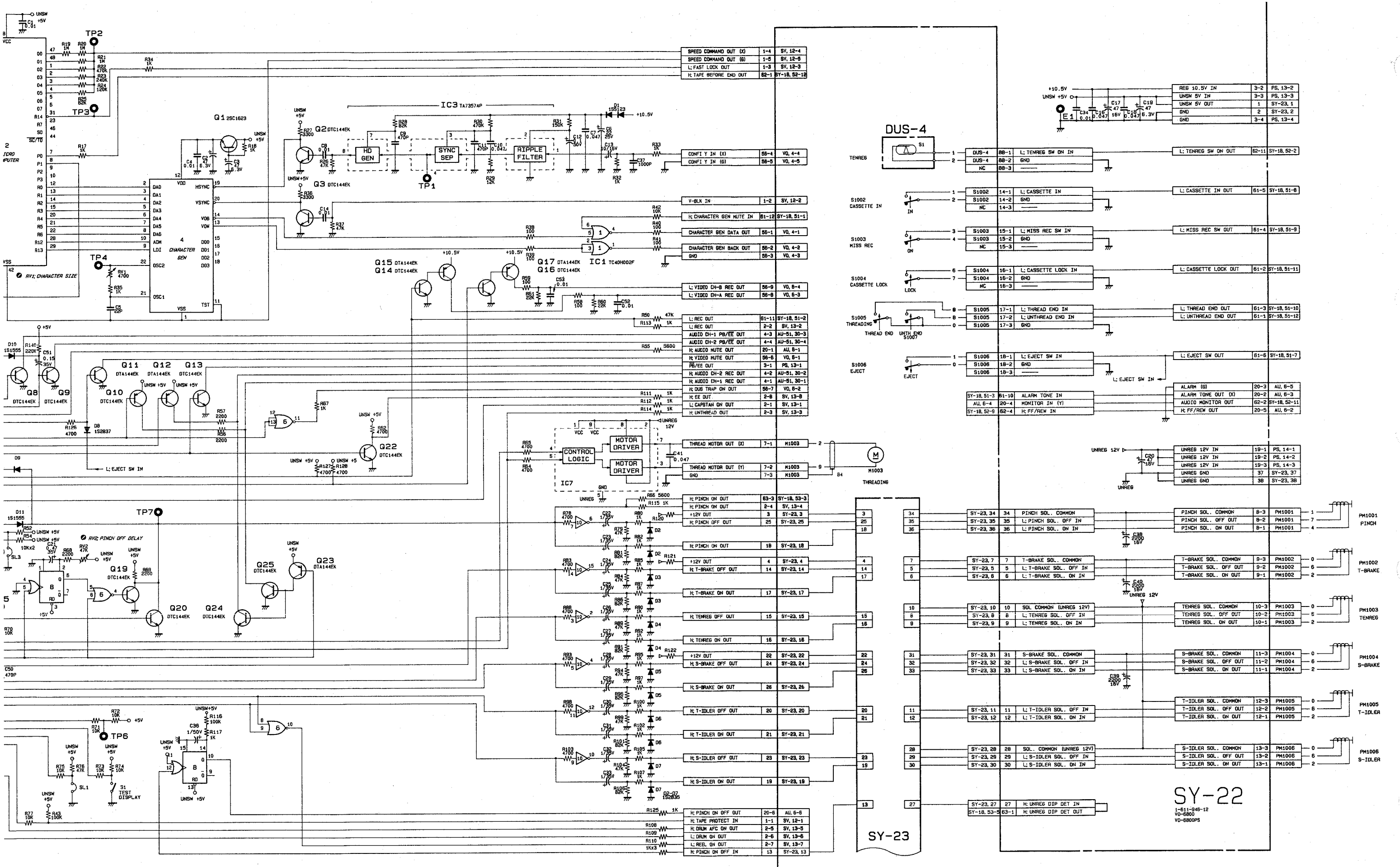

TP1
TP2
TP3
TP4
TP5
TP6
TP7
2 MICRO COMPUTER
4 CHARACTER GEN
5 I/O EXPANDER
9 I/O EXPANDER
IC3 TA7357AP
HD GEN
SYNC SEP
RIPPLE FILTER
IC1 TC40H002F
IC7
CONTROL LOGIC
MOTOR DRIVER
MOTOR DRIVER
Q1 2SC1623
Q2 DTC144EK
Q3 DTC144EK
Q8 DTC144EK
Q9 DTC144EK
Q10 DTC144EK
Q11 DTA144EK
Q12 DTA144EK
Q13 DTC144EK
Q14 DTC144EK
Q15 DTA144EK
Q16 DTC144EK
Q17 DTA144EK
Q19 DTC144EK
Q20 DTC144EK
Q22 DTC144EK
Q23 DTA144EK
Q24 DTC144EK
Q25 DTC144EK
Q26 DTC144EK
RV1; CHARACTER SIZE
RV2; PINCH OFF DELAY
SL1
S1 TEST DISPLAY
L; EJECT SW IN
SY-18, 53-2 | 63-4 | PB CTL IN
SV, 12-6 | 1-6 | TRACKING VO IN
SY-18, 53-1 | 63-5 | L; SEARCH IN
SY-18, 53-4 | 63-2 | CAPSTAN 2FG IN
SV, 12-8 | 1-8 | S-REEL FG IN
SV, 12-7 | 1-7 | T-REEL FG IN
SY-18, 51-4 | 61-9 | H; RF IN
SY-18, 51-6 | 61-7 | 30/25 IN
SY-18, 51-5 | 61-8 | 3.58MHz IN
SY-18, 52-1 | 62-12 | L; RESET IN
SY-18, 52-4 | 62-9 | L; EXPD PROG IN
SY-18, 52-8 | 62-5 | EXPD DATA 2 I/O
SY-18, 52-3 | 62-10 | EXPD DATA 0 I/O
SY-18, 52-7 | 62-6 | EXPD CS A/B IN
SY-18, 52-6 | 62-7 | EXPD DATA 1 I/O
SY-18, 52-5 | 62-8 | EXPD DATA 3 I/O
SY-18, 52-10 | 62-3 | L; CPU RESET EN IN
SPEED COMMAND OUT (X) | 1-4 | SV, 12-4
SPEED COMMAND OUT (G) | 1-5 | SV, 12-5
L; FAST LOCK OUT | 1-3 | SV, 12-3
H; TAPE BEFORE END OUT | 62-1 | SY-18, 52-12
CONFI Y IN (X) | 56-4 | VO, 4-4
CONFI Y IN (G) | 56-5 | VO, 4-5
V-BLK IN | 1-2 | SV, 12-2
H; CHARACTER GEN MUTE IN | 61-12 | SY-18, 51-1
CHARACTER GEN DATA OUT | 56-1 | VO, 4-1
CHARACTER GEN BACK OUT | 56-2 | VO, 4-2
GND | 56-3 | VO, 4-3
L; VIDEO CH-B REC OUT | 56-9 | VO, 6-4
L; VIDEO CH-A REC OUT | 56-8 | VO, 6-3
L; REC OUT | 61-11 | SY-18, 51-2
L; REC OUT | 2-2 | SV, 13-2
AUDIO CH-1 PB/EE OUT | 4-3 | AU-51, 30-3
AUDIO CH-2 PB/EE OUT | 4-4 | AU-51, 30-4
H; AUDIO MUTE OUT | 20-1 | AU, 6-1
H; VIDEO MUTE OUT | 56-6 | VO, 6-1
PB/EE OUT | 3-1 | PS, 13-1
H; AUDIO CH-2 REC OUT | 4-2 | AU-51, 30-2
H; AUDIO CH-1 REC OUT | 4-1 | AU-51, 30-1
H; DUB TRAP ON OUT | 56-7 | VO, 6-2
H; EE OUT | 2-8 | SV, 13-8
L; CAPSTAN ON OUT | 2-1 | SV, 13-1
H; UNTHREAD OUT | 2-3 | SV, 13-3
THREAD MOTOR OUT (X) | 7-1 | M1003
THREAD MOTOR OUT (Y) | 7-2 | M1003
GND | 7-3 | M1003
H; PINCH ON OUT | 63-3 | SY-18, 53-3
H; PINCH ON OUT | 2-4 | SV, 13-4
+12V OUT | 3 | SY-23, 3
H; PINCH OFF OUT | 25 | SY-23, 25
H; PINCH ON OUT | 18 | SY-23, 18
+12V OUT | 4 | SY-23, 4
H; T-BRAKE OFF OUT | 14 | SY-23, 14
H; T-BRAKE ON OUT | 17 | SY-23, 17
H; TENREG OFF OUT | 15 | SY-23, 15
H; TENREG ON OUT | 16 | SY-23, 16
+12V OUT | 22 | SY-23, 22
H; S-BRAKE OFF OUT | 24 | SY-23, 24
H; S-BRAKE ON OUT | 26 | SY-23, 26
H; T-IDLER OFF OUT | 20 | SY-23, 20
H; T-IDLER ON OUT | 21 | SY-23, 21
H; S-IDLER OFF OUT | 23 | SY-23, 23
H; S-IDLER ON OUT | 19 | SY-23, 19
H; PINCH ON OFF OUT | 20-6 | AU, 6-6
H; TAPE PROTECT IN | 1-1 | SV, 12-1
H; DRUM AFC ON OUT | 2-5 | SV, 13-5
L; DRUM ON OUT | 2-6 | SV, 13-6
L; REEL ON OUT | 2-7 | SV, 13-7
H; PINCH ON OFF IN | 13 | SY-23, 13
DTA144EK
DTC144EK
SL1 | BVU SHORT | VO OPEN

REF NO	TYPE	+5V PIN	GND PIN
IC1	TC40H002F	14	7
IC2	M888501-247M	18	42
IC3	TA7357AP	*	5
IC4	MN1237AD	*	1
IC5	uPD82C43G	24	12
IC6	TC4001BF	14	7
IC7	M54543L	1, 9	5
IC8	TC4538BF	16	8
IC9	uPD82C43G	24	12
IC10	TC4049BF	1	8

* REFER TO SCHEMATIC

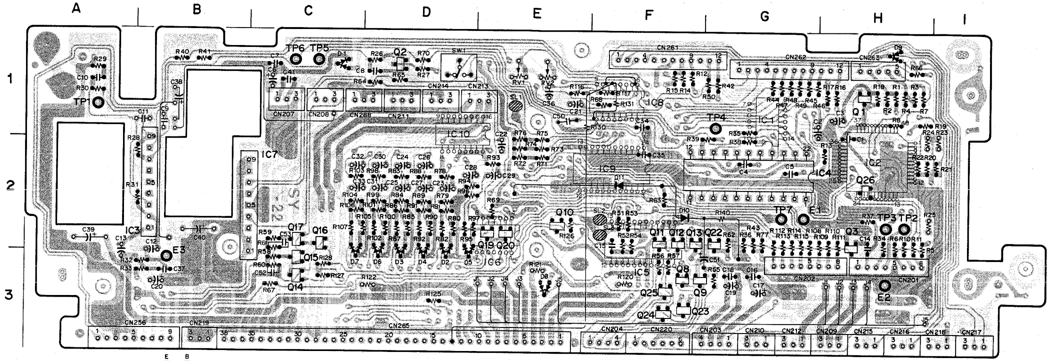
EDITING POINT ADJ

SL2 SHORT SL3 OPEN	-2PG FROM STOP
SL2 OPEN SL3 SHORT	+2PG FROM STOP

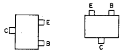

TP2
TP3
TP4
TP1
TP7
TP6
E1
Q1 2SC1623
Q2 DTC144EK
Q3 DTC144EK
Q8
Q9
Q10
Q11
Q12
Q13
Q14 DTC144EK
Q15 DTA144EK
Q16 DTC144EK
Q17 DTA144EK
Q19
Q20 DTC144EK
Q22 DTC144EK
Q23 DTA144EK
Q24 DTC144EK
Q25 DTC144EK
IC1 TC40H002F
IC3 TA7357AP
IC7
HD GEN
SYNC SEP
RIPPLE FILTER
CHARACTER GEN
CONTROL LOGIC
MOTOR DRIVER
MOTOR DRIVER
RV1 CHARACTER SIZE
RV2 PINCH OFF DELAY
DUS-4
S1
TENREG
S1002 CASSETTE IN
S1003 MISS REC
S1004 CASSETTE LOCK
S1005 THREADING
S1007
THREAD END
UNTH END
S1006 EJECT
M1003 THREADING
SPEED COMMAND OUT (X)
SPEED COMMAND OUT (Y)
L: FAST LOCK OUT
H: TAPE BEFORE END OUT
CONFI Y IN (X)
CONFI Y IN (Y)
V-BLK IN
H: CHARACTER GEN MUTE IN
CHARACTER GEN DATA OUT
CHARACTER GEN BACK OUT
GND
L: VIDEO CH-B REC OUT
L: VIDEO CH-A REC OUT
L: REC OUT
AUDIO CH-1 PB/EE OUT
AUDIO CH-2 PB/EE OUT
H: AUDIO MUTE OUT
H: VIDEO MUTE OUT
PB/EE OUT
H: AUDIO CH-2 REC OUT
H: AUDIO CH-1 REC OUT
H: DUB TRAP ON OUT
H: EE OUT
L: CAPSTAN ON OUT
L: UNTHREAD OUT
THREAD MOTOR OUT (X)
THREAD MOTOR OUT (Y)
H: PINCH ON OUT
H: PINCH OFF OUT
+12V OUT
H: T-BRAKE OFF OUT
H: T-BRAKE ON OUT
H: TENREG OFF OUT
H: TENREG ON OUT
H: S-BRAKE OFF OUT
H: S-BRAKE ON OUT
H: T-IDLER OFF OUT
H: T-IDLER ON OUT
H: S-IDLER OFF OUT
H: S-IDLER ON OUT
H: PINCH ON OFF OUT
H: TAPE PROTECT IN
H: DRUM AFC ON OUT
L: DRUM ON OUT
L: REEL ON OUT
H: PINCH ON OFF IN
REG 10.5V IN
UNSW 5V IN
UNSW 5V OUT
L: TENREG SW ON IN
L: TENREG SW ON OUT
L: CASSETTE IN
L: CASSETTE IN OUT
L: MISS REC SW IN
L: MISS REC SW OUT
L: CASSETTE LOCK IN
L: CASSETTE LOCK OUT
L: THREAD END IN
L: UNTHREAD END IN
L: THREAD END OUT
L: UNTHREAD END OUT
L: EJECT SW IN
L: EJECT SW OUT
ALARM TONE IN
MONITOR IN (Y)
H: FF/REW IN
ALARM (G)
ALARM TONE OUT (X)
AUDIO MONITOR OUT
H: FF/REW OUT
UNREG 12V IN
UNREG GND
PINCH SOL. COMMON
L: PINCH SOL. OFF IN
L: PINCH SOL. ON IN
T-BRAKE SOL. COMMON
L: T-BRAKE SOL. OFF IN
L: T-BRAKE SOL. ON IN
SOL COMMON (UNREG 12V)
L: TENREG SOL. OFF IN
L: TENREG SOL. ON IN
S-BRAKE SOL. COMMON
L: S-BRAKE SOL. OFF IN
L: S-BRAKE SOL. ON IN
L: T-IDLER SOL. OFF IN
L: T-IDLER SOL. ON IN
SOL. COMMON (UNREG 12V)
L: S-IDLER SOL. OFF IN
L: S-IDLER SOL. ON IN
H: UNREG DIP DET IN
H: UNREG DIP DET OUT
PM1001 PINCH
PM1002 T-BRAKE
PM1003 TENREG
PM1004 S-BRAKE
PM1005 T-IDLER
PM1006 S-IDLER
SY-23
SY-22
1-611-945-12
VO-6800
VO-6800PS

SY-22 (SYSTEM CONTROL)

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)


A
B
C
D
E
F
G
H
I
1
2
3
TP1
TP2
TP3
TP4
TP5
TP6
TP7
E1
E2
E3
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
SW.1
RV1
RV2
SL1
SL2
CN201
CN202
CN203
CN204
CN207
CN208
CN209
CN210
CN211
CN212
CN213
CN214
CN215
CN216
CN217
CN218
CN219
CN220
CN256
CN261
CN262
CN263
CN265
CN288

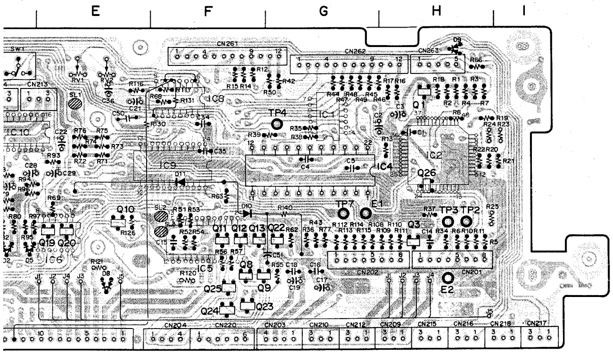
SY-22-SOLDERING SIDE-
1-611-946-12
VO-6800



CN201	H - 3	D1	C - 1	Q1	H - 1	SW	D - 1
CN202	G - 3	D2	D - 3	Q2	D - 1		
CN203	G - 3	D3	D - 3	Q3	H - 2	TP1	A - 1
CN204	F - 3	D4	D - 3	Q8	F - 3	TP2	H - 2
CN207	C - 1	D5	D - 3	Q9	F - 3	TP3	H - 2
CN208	C - 1	D6	D - 3	Q10	E - 2	TP4	G - 1
CN209	H - 3	D7	C - 3	Q11	F - 2	TP5	C - 1
CN210	G - 3	D8	E - 3	Q12	F - 2	TP6	C - 1
CN211	D - 1	D9	H - 1	Q13	F - 2	TP7	G - 2
CN212	G - 3	D10	F - 2	Q14	C - 3		
CN213	E - 1	D11	F - 2	Q15	C - 3		
CN214	D - 1			Q16	C - 2		
CN215	H - 3	E1	G - 2	Q17	C - 2		
CN216	H - 3	E2	H - 3	Q19	E - 2		
CN217	I - 3	E3	B - 3	Q20	E - 2		
CN218	I - 3			Q22	G - 2		
CN219	B - 3	IC1	G - 1	Q23	F - 3		
CN220	F - 3	IC2	H - 2	Q24	F - 3		
CN256	A - 3	IC3	B - 2	Q25	F - 3		
CN261	F - 1	IC4	G - 2	Q26	H - 2		
CN262	G - 1	IC5	F - 2				
CN263	H - 1	IC6	E - 2	RV1	E - 1		
CN265	D - 3	IC7	C - 2	RV2	E - 1		
CN288	D - 1	IC8	F - 1				
		IC9	F - 2				
		IC10	D - 1				

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501-247M	18	42
IC 3	TA7357AP	*	5
IC 4	MN1237AD	*	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC10	TC4049BF	1	8

* REFER TO SCHEMATIC


E
F
G
H
I
SW1
RV1
RV2
CN213
IC10
IC8
IC9
IC1
IC2
IC4
IC5
IC6
CN261
CN262
CN263
CN202
CN201
TP4
TP7
TP3
TP2
E1
E2
Q1
Q3
Q8
Q9
Q10
Q11
Q12
Q13
Q19
Q20
Q22
Q23
Q24
Q25
Q26
SL1
SL2
D10
D11
J1
J2
J3
J4
J5
CN204
CN220
CN203
CN210
CN212
CN209
CN215
CN216
CN218
CN217

SY-22 - SOLDERING SIDE -

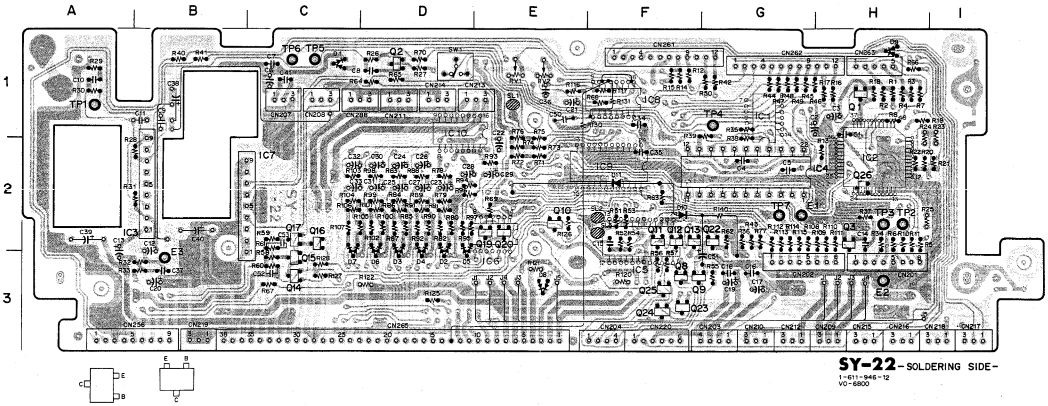
1-611-946-12
VO-6800

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501-247M	18	42
IC 3	TA7357AP	*	5
IC 4	MN1237AD	*	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC10	TC4049BF	1	8

* REFER TO SCHEMATIC

SY-22 (SYSTEM CONTROL)

S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)

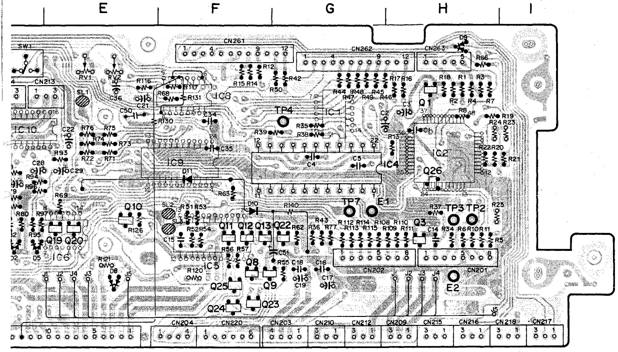

A
B
C
D
E
F
G
H
I
1
2
3
TP1
TP2
TP3
TP4
TP5
TP6
TP7
E1
E2
E3
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
SW1
RV1
RV2
CN201
CN202
CN203
CN204
CN207
CN208
CN209
CN210
CN211
CN212
CN213
CN214
CN215
CN216
CN217
CN218
CN219
CN220
CN256
CN261
CN262
CN263
CN265
CN288
E
B
C

SY-22-SOLDERING SIDE-
1-611-946-12
VO-6800

CN201	H - 3	D1	C - 1	Q1	H - 1	SW	D - 1
CN202	G - 3	D2	D - 3	Q2	D - 1		
CN203	G - 3	D3	D - 3	Q3	H - 2	TP1	A - 1
CN204	F - 3	D4	D - 3	Q8	F - 3	TP2	H - 2
CN207	C - 1	D5	D - 3	Q9	F - 3	TP3	H - 2
CN208	C - 1	D6	D - 3	Q10	E - 2	TP4	G - 1
CN209	H - 3	D7	C - 3	Q11	F - 2	TP5	C - 1
CN210	G - 3	D8	E - 3	Q12	F - 2	TP6	C - 1
CN211	D - 1	D9	H - 1	Q13	F - 2	TP7	G - 2
CN212	G - 3	D10	F - 2	Q14	C - 3		
CN213	E - 1	D11	F - 2	Q15	C - 3		
CN214	D - 1			Q16	C - 2		
CN215	H - 3	E1	G - 2	Q17	C - 2		
CN216	H - 3	E2	H - 3	Q19	E - 2		
CN217	I - 3	E3	B - 3	Q20	E - 2		
CN218	I - 3			Q22	G - 2		
CN219	B - 3	IC1	G - 1	Q23	F - 3		
CN220	F - 3	IC2	H - 2	Q24	F - 3		
CN256	A - 3	IC3	B - 2	Q25	F - 3		
CN261	F - 1	IC4	G - 2	Q26	H - 2		
CN262	G - 1	IC5	F - 2				
CN263	H - 1	IC6	E - 2	RV1	E - 1		
CN265	D - 3	IC7	C - 2	RV2	E - 1		
CN288	D - 1	IC8	F - 1				
		IC9	F - 2				
		IC10	D - 1				

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501-247M	18	42
IC 3	TA7357AP	*	5
IC 4	MN1237AD	*	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC10	TC4049BF	1	8

* REFER TO SCHEMATIC


E
F
G
H
I
SW1
RV1
RV2
CN213
CN261
CN262
CN263
IC10
IC9
IC8
IC1
IC4
IC2
IC6
IC5
TP4
TP7
E1
TP3
TP2
E2
Q1
Q3
Q8
Q9
Q10
Q11
Q12
Q13
Q19
Q20
Q22
Q23
Q24
Q25
Q26
SL1
SL2
D9
D10
D11
CN202
CN201
CN204
CN220
CN203
CN210
CN212
CN209
CN215
CN216
CN218
CN217
J1
J2
J3
J4
J5

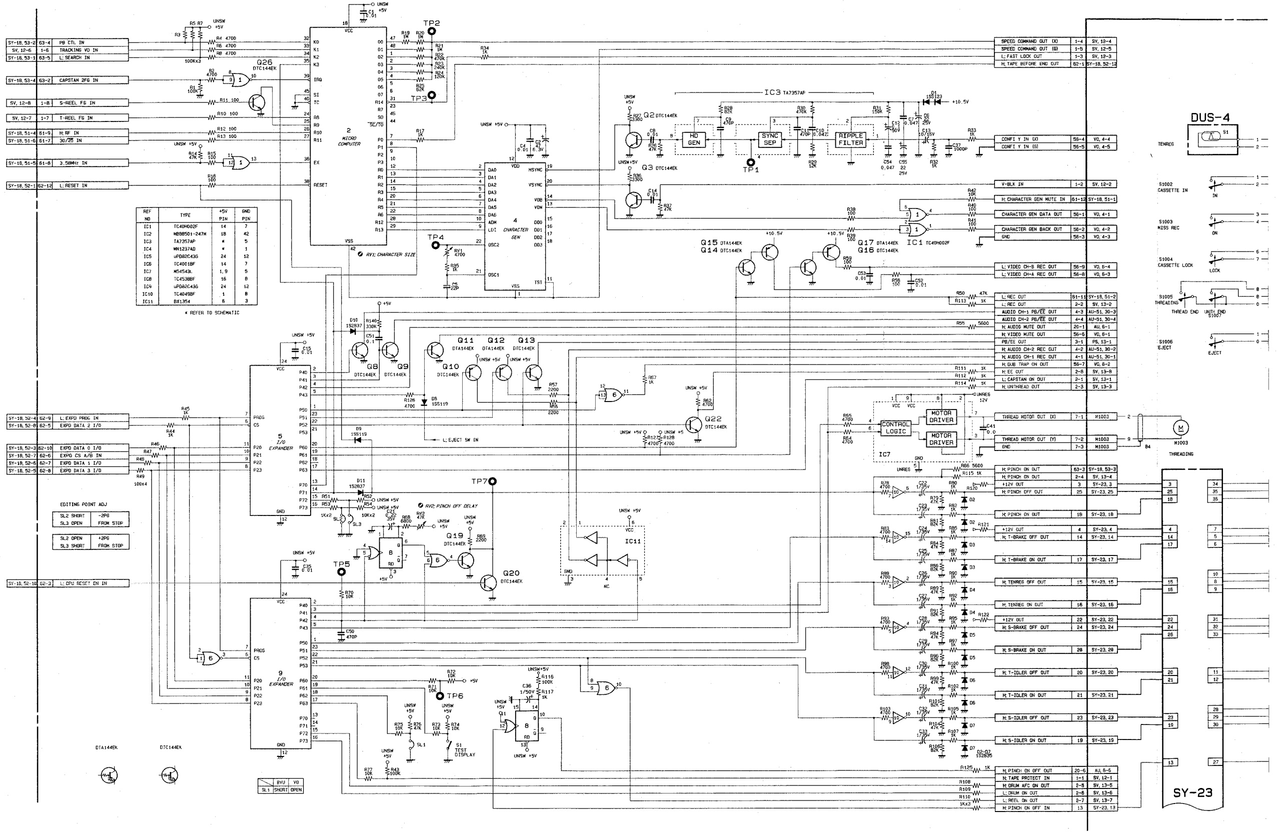
SY-22-SOLDERING SIDE-
1-611-946-12
VO-6800

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501-247M	18	42
IC 3	TA7357AP	*	5
IC 4	MN1237AD	*	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC10	TC4049BF	1	8

* REFER TO SCHEMATIC

SY-22 (SYSTEM CONTROL)
DUS-4 (TENREG SW)

S/N 10331 AND LATER (UC)
S/N 10111 AND LATER (J)



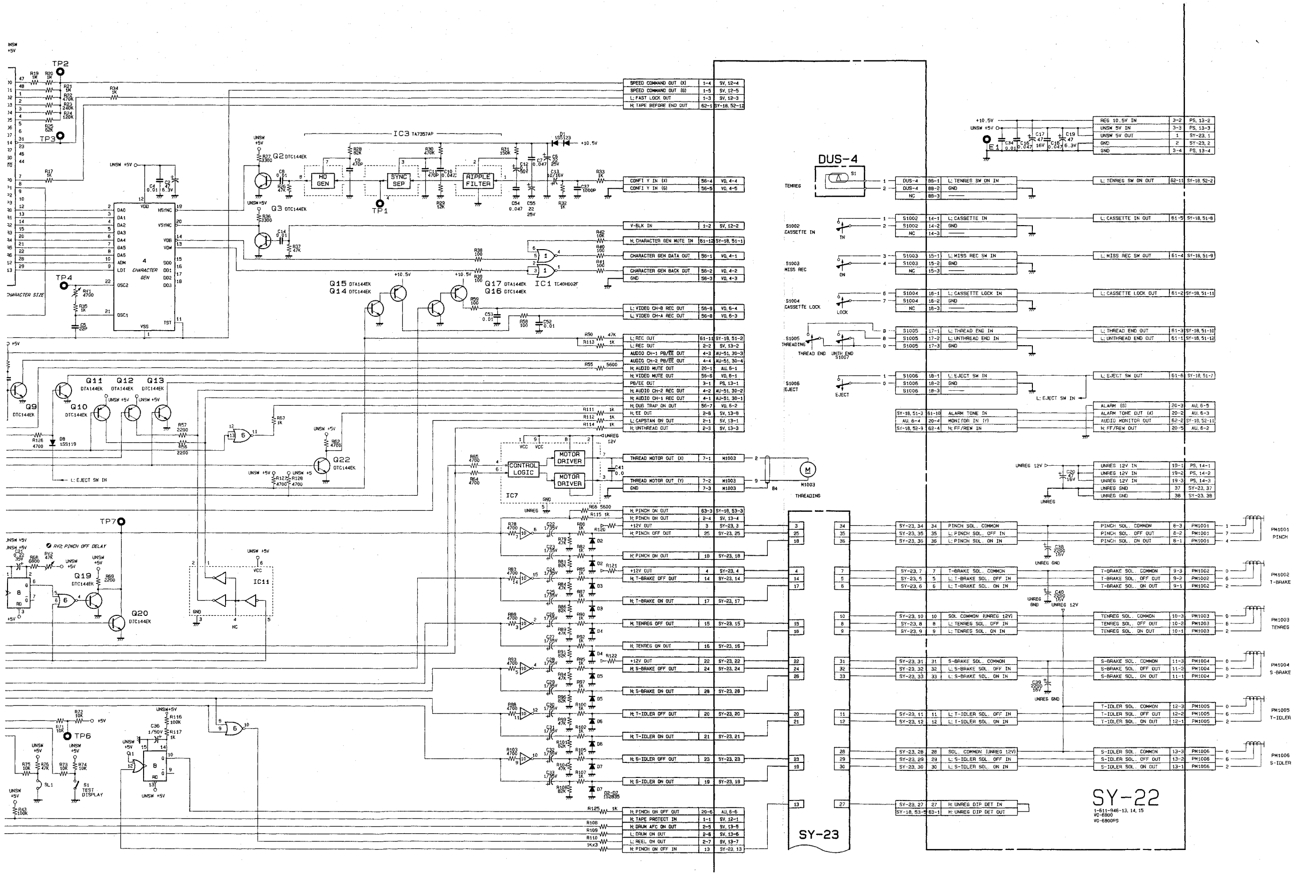
SY-18, 53-2 | 63-4 | PB CTL IN
SV, 12-6 | 1-6 | TRACKING VD IN
SY-18, 53-1 | 63-5 | L; SEARCH IN
SY-18, 53-4 | 63-2 | CAPSTAN 2FG IN
SV, 12-8 | 1-8 | S-REEL FG IN
SV, 12-7 | 1-7 | T-REEL FG IN
SY-18, 51-4 | 61-9 | H; RF IN
SY-18, 51-6 | 61-7 | 30/25 IN
SY-18, 51-5 | 61-8 | 3.58MHz IN
SY-18, 52-1 | 62-12 | L; RESET IN
SY-18, 52-4 | 62-9 | L; EXPD PROG IN
SY-18, 52-8 | 62-5 | EXPD DATA 2 I/O
SY-18, 52-3 | 62-10 | EXPD DATA 0 I/O
SY-18, 52-7 | 62-6 | EXPD CS A/B IN
SY-18, 52-6 | 62-7 | EXPD DATA 1 I/O
SY-18, 52-5 | 62-8 | EXPD DATA 3 I/O
SY-18, 52-10 | 62-3 | L; CPU RESET ON IN
2 MICRO COMPUTER
4 CHARACTER GEN
5 I/O EXPANDER
9 I/O EXPANDER
IC3 TA7357AP
HD GEN
SYNC SEP
RIPPLE FILTER
IC1 TC40H002F
IC7
CONTROL LOGIC
MOTOR DRIVER
MOTOR DRIVER
IC11
TP1
TP2
TP3
TP4
TP5
TP6
TP7
Q2 DTC144EK
Q3 DTC144EK
Q8 DTC144EK
Q9 DTC144EK
Q10 DTC144EK
Q11 DTA144EK
Q12 DTA144EK
Q13 DTC144EK
Q14 DTC144EK
Q15 DTA144EK
Q16 DTC144EK
Q17 DTA144EK
Q19 DTC144EK
Q20 DTC144EK
Q22 DTC144EK
Q26 DTC144EK
RV1; CHARACTER SIZE
RV2; PINCH OFF DELAY
L; EJECT SW IN
S1 TEST DISPLAY
SL1
SL2
SL3
UNSW +5V
UNREG 12V
+10.5V
SPEED COMMAND OUT (X) | 1-4 | SV, 12-4
SPEED COMMAND OUT (G) | 1-5 | SV, 12-5
L; FAST LOCK OUT | 1-3 | SV, 12-3
H; TAPE BEFORE END OUT | 62-1 | SY-18, 52-12
CONFI Y IN (X) | 56-4 | VO, 4-4
CONFI Y IN (G) | 56-5 | VO, 4-5
V-BLK IN | 1-2 | SV, 12-2
H; CHARACTER GEN MUTE IN | 61-12 | SY-18, 51-1
CHARACTER GEN DATA OUT | 56-1 | VO, 4-1
CHARACTER GEN BACK OUT | 56-2 | VO, 4-2
GND | 56-3 | VO, 4-3
L; VIDEO CH-B REC OUT | 56-9 | VO, 6-4
L; VIDEO CH-A REC OUT | 56-8 | VO, 6-3
L; REC OUT | 61-11 | SY-18, 51-2
L; REC OUT | 2-2 | SV, 13-2
AUDIO CH-1 PB/EE OUT | 4-3 | AU-51, 30-3
AUDIO CH-2 PB/EE OUT | 4-4 | AU-51, 30-4
H; AUDIO MUTE OUT | 20-1 | AU, 6-1
H; VIDEO MUTE OUT | 56-6 | VO, 6-1
PB/EE OUT | 3-1 | PS, 13-1
H; AUDIO CH-2 REC OUT | 4-2 | AU-51, 30-2
H; AUDIO CH-1 REC OUT | 4-1 | AU-51, 30-1
H; DUB TRAP ON OUT | 56-7 | VO, 6-2
H; EE OUT | 2-8 | SV, 13-8
L; CAPSTAN ON OUT | 2-1 | SV, 13-1
H; UNTHREAD OUT | 2-3 | SV, 13-3
THREAD MOTOR OUT (X) | 7-1 | M1003
THREAD MOTOR OUT (Y) | 7-2 | M1003
GND | 7-3 | M1003
M1003 THREADING
H; PINCH ON OUT | 63-3 | SY-18, 53-3
H; PINCH ON OUT | 2-4 | SV, 13-4
+12V OUT | 3 | SY-23, 3
H; PINCH OFF OUT | 25 | SY-23, 25
H; PINCH ON OUT | 18 | SY-23, 18
+12V OUT | 4 | SY-23, 4
H; T-BRAKE OFF OUT | 14 | SY-23, 14
H; T-BRAKE ON OUT | 17 | SY-23, 17
H; TENREG OFF OUT | 15 | SY-23, 15
H; TENREG ON OUT | 16 | SY-23, 16
+12V OUT | 22 | SY-23, 22
H; S-BRAKE OFF OUT | 24 | SY-23, 24
H; S-BRAKE ON OUT | 28 | SY-23, 28
H; T-IDLER OFF OUT | 20 | SY-23, 20
H; T-IDLER ON OUT | 21 | SY-23, 21
H; S-IDLER OFF OUT | 23 | SY-23, 23
H; S-IDLER ON OUT | 19 | SY-23, 19
D2-D7 1S2835
H; PINCH ON OFF OUT | 20-6 | AU, 6-6
H; TAPE PROTECT IN | 1-1 | SV, 12-1
H; DRUM AFC ON OUT | 2-5 | SV, 13-5
L; DRUM ON OUT | 2-6 | SV, 13-6
L; REEL ON OUT | 2-7 | SV, 13-7
H; PINCH ON OFF IN | 13 | SY-23, 13
SY-23
DUS-4
TENREG
S1
S1002 CASSETTE IN
IN
S1003 MISS REC
ON
S1004 CASSETTE LOCK
LOCK
S1005 THREADING
THREAD END
UNTH END S1007
S1006 EJECT
EJECT
DTA144EK
DTC144EK
SL1 | BVU SHORT | VO OPEN

REF NO	TYPE	+5V PIN	GND PIN
IC1	TC40H002F	14	7
IC2	MBB8501-247M	18	42
IC3	TA7357AP	*	5
IC4	MN1237AD	*	1
IC5	uPD82C43G	24	12
IC6	TC4001BF	14	7
IC7	M54543L	1, 9	5
IC8	TC4538BF	16	8
IC9	uPD82C43G	24	12
IC10	TC4049BF	1	8
IC11	BX1354	6	3

* REFER TO SCHEMATIC

EDITING POINT ADJ

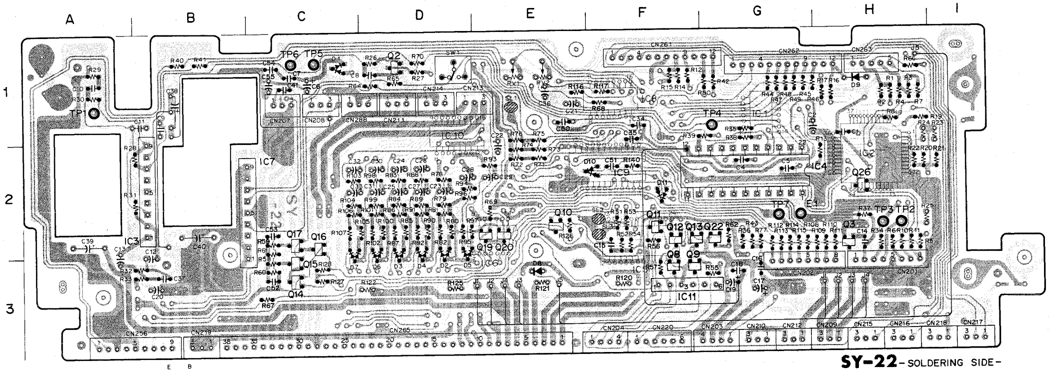
SL2 SHORT SL3 OPEN	-2PG FROM STOP
SL2 OPEN SL3 SHORT	+2PG FROM STOP


TP2
TP3
TP4
TP6
TP7
TP1
E1
IC3 TA7357AP
HD GEN
SYNC SEP
RIPPLE FILTER
CHARACTER GEN
IC1 TC40H002F
Q2 DTC144EK
Q3 DTC144EK
Q9 DTC144EK
Q10 DTC144EK
Q11 DTA144EK
Q12 DTA144EK
Q13 DTA144EK
Q14 DTC144EK
Q15 DTA144EK
Q16 DTC144EK
Q17 DTA144EK
Q19 DTC144EK
Q20 DTC144EK
Q22 DTC144EK
CONTROL LOGIC
MOTOR DRIVER
MOTOR DRIVER
IC7
IC11
M1003
THREADING
DUS-4
TENREG
S1002 CASSETTE IN
S1003 MISS REC
S1004 CASSETTE LOCK
S1005 THREADING
S1006 EJECT
THREAD END
UNTH END
S1007
L: EJECT SW IN
RV2 PINCH OFF DELAY
S1 TEST DISPLAY
SPEED COMMAND OUT (X)
SPEED COMMAND OUT (S)
L: FAST LOCK OUT
H: TAPE BEFORE END OUT
CONFI Y IN (X)
CONFI Y IN (S)
V-BLK IN
H: CHARACTER GEN MUTE IN
CHARACTER GEN DATA OUT
CHARACTER GEN BACK OUT
L: VIDEO CH-B REC OUT
L: VIDEO CH-A REC OUT
L: REC OUT
AUDIO CH-1 PB/EE OUT
AUDIO CH-2 PB/EE OUT
H: AUDIO MUTE OUT
H: VIDEO MUTE OUT
PB/EE OUT
H: AUDIO CH-2 REC OUT
H: AUDIO CH-1 REC OUT
H: DUB TRAP ON OUT
H: EE OUT
L: CAPSTAN ON OUT
L: UNTHREAD OUT
THREAD MOTOR OUT (X)
THREAD MOTOR OUT (Y)
H: PINCH ON OUT
H: PINCH OFF OUT
+12V OUT
H: T-BRAKE OFF OUT
H: T-BRAKE ON OUT
H: TENREG OFF OUT
H: TENREG ON OUT
H: S-BRAKE OFF OUT
H: S-BRAKE ON OUT
H: T-IDLER OFF OUT
H: T-IDLER ON OUT
H: S-IDLER OFF OUT
H: S-IDLER ON OUT
H: PINCH ON OFF OUT
H: TAPE PROTECT IN
H: DRUM AFC ON OUT
L: DRUM ON OUT
L: REEL ON OUT
H: PINCH ON OFF IN
REG 10.5V IN
UNSW 5V IN
UNSW 5V OUT
GND
L: TENREG SW ON IN
L: TENREG SW ON OUT
L: CASSETTE IN
L: CASSETTE IN OUT
L: MISS REC SW IN
L: MISS REC SW OUT
L: CASSETTE LOCK IN
L: CASSETTE LOCK OUT
L: THREAD END IN
L: UNTHREAD END IN
L: THREAD END OUT
L: UNTHREAD END OUT
L: EJECT SW IN
L: EJECT SW OUT
ALARM TONE IN
MONITOR IN (Y)
H: FF/REW IN
ALARM (S)
ALARM TONE OUT (X)
AUDIO MONITOR OUT
H: FF/REW OUT
UNREG 12V IN
UNREG GND
PINCH SOL. COMMON
L: PINCH SOL. OFF IN
L: PINCH SOL. ON IN
PINCH SOL. OFF OUT
PINCH SOL. ON OUT
T-BRAKE SOL. COMMON
L: T-BRAKE SOL. OFF IN
L: T-BRAKE SOL. ON IN
SOL COMMON (UNREG 12V)
L: TENREG SOL. OFF IN
L: TENREG SOL. ON IN
TENREG SOL. COMMON
S-BRAKE SOL. COMMON
L: S-BRAKE SOL. OFF IN
L: S-BRAKE SOL. ON IN
L: T-IDLER SOL. OFF IN
L: T-IDLER SOL. ON IN
T-IDLER SOL. COMMON
SOL. COMMON (UNREG 12V)
L: S-IDLER SOL. OFF IN
L: S-IDLER SOL. ON IN
S-IDLER SOL. COMMON
H: UNREG DIP DET IN
H: UNREG DIP DET OUT
PM1001 PINCH
PM1002 T-BRAKE
PM1003 TENREG
PM1004 S-BRAKE
PM1005 T-IDLER
PM1006 S-IDLER
SY-23
SY-22
1-611-946-13, 14, 15
VO-6800
VO-6800PS

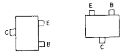
]

SY-22 (SYSTEM CONTROL)

S/N 12781 AND LATER (UC)
S/N 10561 AND LATER (J)


A
B
C
D
E
F
G
H
I
1
2
3
TP1
TP2
TP3
TP4
TP5
TP6
TP7
IC3
IC4
IC7
IC9
IC10
IC11
Q2
Q3
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q19
Q20
Q22
Q26
E1
CN201
CN202
CN203
CN204
CN207
CN208
CN209
CN210
CN211
CN212
CN213
CN214
CN215
CN216
CN217
CN218
CN219
CN220
CN256
CN261
CN262
CN263
CN265
CN288

SY-22-SOLDERING SIDE-
1-611-946-15
VO-6800
VO-6800PS



CN201	H-3
CN202	G-3
CN203	G-3
CN204	F-3
CN207	C-1
CN208	C-1
CN209	H-3
CN210	G-3
CN211	D-1
CN212	G-3
CN213	E-1
CN214	D-1
CN215	H-3
CN216	H-3
CN217	I-3
CN218	I-3
CN219	B-3
CN220	F-3
CN256	A-3
CN261	F-1
CN262	G-1
CN263	H-1
CN265	D-3
CN288	D-1

D1	C-1
D2	D-3
D3	D-3
D4	D-3
D5	D-3
D6	D-3
D7	C-3
D8	E-3
D9	H-1
D10	F-2
D11	F-2
E1	G-2
IC1	G-1
IC2	H-2
IC3	B-2
IC4	G-2
IC5	F-2
IC6	E-2
IC7	C-2
IC8	F-1
IC9	F-2
IC10	D-1
IC11	F-3

Q2	D-1
Q3	H-2
Q8	F-3
Q9	F-3
Q10	E-2
Q11	F-2
Q12	F-2
Q13	F-2
Q14	C-3
Q15	C-3
Q16	C-2
Q17	C-2
Q19	E-2
Q20	E-2
Q22	G-2
Q26	H-2
RV1	E-1
RV2	E-1

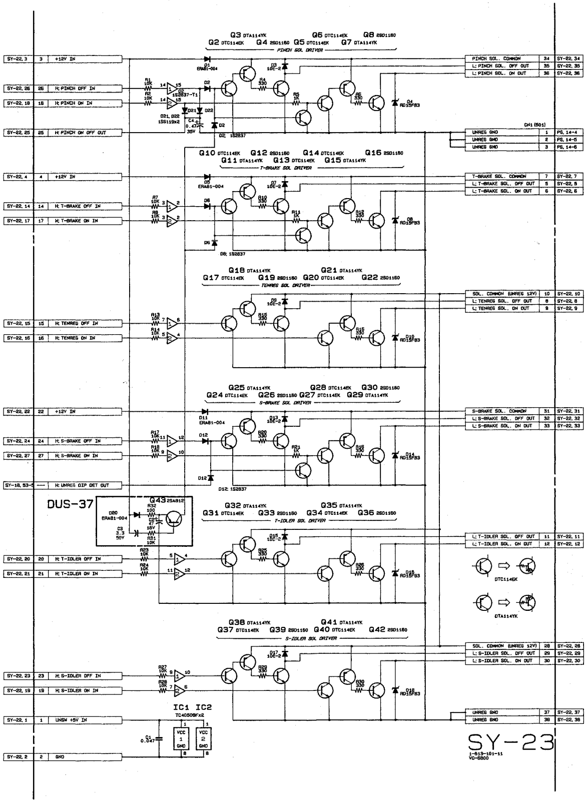
SW	D-1
TP1	A-1
TP2	H-2
TP3	H-2
TP4	G-1
TP5	C-1
TP6	C-1
TP7	G-2

Ref. No.	Type	Pin No.	
		+5V	GND
IC 1	TC40H002F	14	7
IC 2	MB88501-247M	18	42
IC 3	TA7357AP	*	5
IC 4	MN1237AD	*	1
IC 5	μPD82C43G	24	12
IC 6	TC4001BF	14	7
IC 7	M54543L	1, 9	5
IC 8	TC4538BF	16	8
IC 9	μPD82C43G	24	12
IC 10	TC4049BF	1	8
IC 11	BX1354	6	3

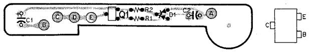
*REFER TO SCHEMATIC

SY-23 (SOLENOID DRIVER)
DUS-37

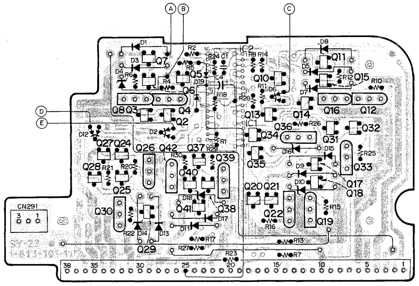
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


PINCH SOL DRIVER
T-BRAKE SOL DRIVER
TENRES SOL DRIVER
S-BRAKE SOL DRIVER
T-IDLER SOL DRIVER
S-IDLER SOL DRIVER
DUS-37
IC1 IC2
TC4050BFx2
DTC114EK
DTA114YK
SY-23
1-613-101-11
VO-6800

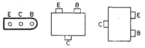
S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)



DUS-37 -SOLDERING SIDE-
VO-6800

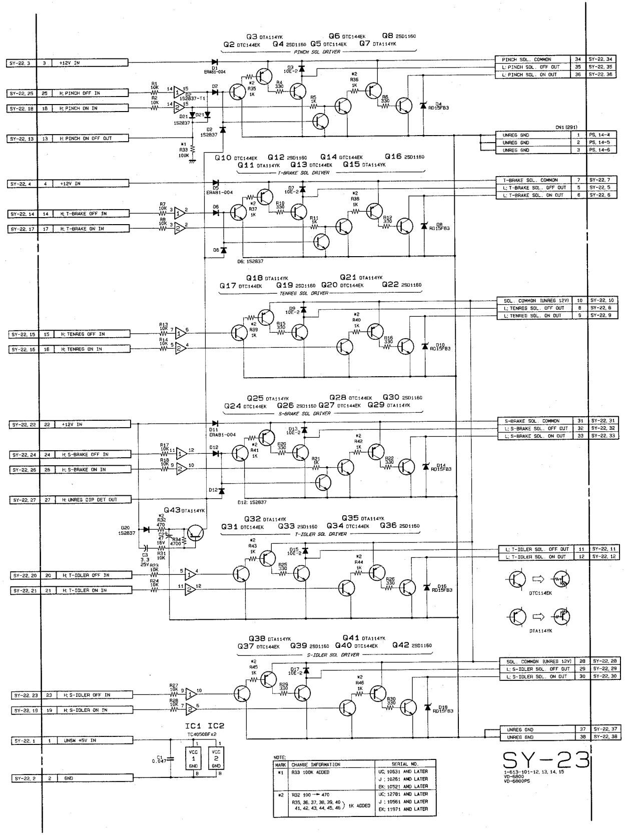


SY-23 -SOLDERING SIDE-
1-613-101-11
VO-6800



SY-23 (SOLENOID DRIVER)

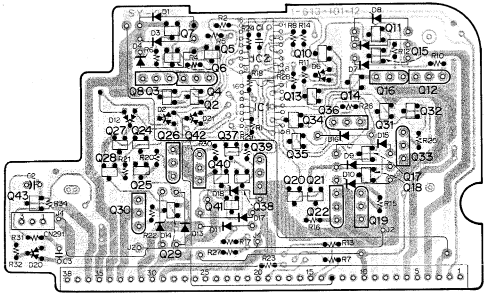
S/N 10031 AND LATER (UC)
S/N 10011 AND LATER (J)

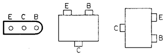

Q3 DTA114YK Q6 DTC144EK Q8 2SD1160
Q2 DTC144EK Q4 2SD1160 Q5 DTC114EK Q7 DTA114YK
PINCH SOL DRIVER
SY-22, 3 | 3 | +12V IN
SY-22, 25 | 25 | H; PINCH OFF IN
SY-22, 18 | 18 | H; PINCH ON IN
SY-22, 13 | 13 | H; PINCH ON OFF OUT
D1 ERA81-004
D2 1S2837-T1
D21 1S2837
D2 1S2837
*1 R33 100K
R1 10K
R2 10K
*2 R35 1K
R4 330
R5 1K
*2 R36 1K
R6 330
D3 10E-2
D4 RD15FB3
PINCH SOL. COMMON | 34 | SY-22, 34
L; PINCH SOL. OFF OUT | 35 | SY-22, 35
L; PINCH SOL. ON OUT | 36 | SY-22, 36
CN1 (291)
UNREG GND | 1 | PS, 14-4
UNREG GND | 2 | PS, 14-5
UNREG GND | 3 | PS, 14-6
Q10 DTC144EK Q12 2SD1160 Q14 DTC144EK Q16 2SD1160
Q11 DTA114YK Q13 DTC144EK Q15 DTA114YK
T-BRAKE SOL DRIVER
SY-22, 4 | 4 | +12V IN
SY-22, 14 | 14 | H; T-BRAKE OFF IN
SY-22, 17 | 17 | H; T-BRAKE ON IN
D5 ERA81-004
D6; 1S2837
R7 10K
R8 10K
*2 R37 1K
R10 330
R11 1K
*2 R38 1K
R12 330
D7 10E-2
D8 RD15FB3
T-BRAKE SOL. COMMON | 7 | SY-22, 7
L; T-BRAKE SOL. OFF OUT | 5 | SY-22, 5
L; T-BRAKE SOL. ON OUT | 6 | SY-22, 6
Q18 DTA114YK Q21 DTA114YK
Q17 DTC144EK Q19 2SD1160 Q20 DTC144EK Q22 2SD1160
TENREG SOL DRIVER
SY-22, 15 | 15 | H; TENREG OFF IN
SY-22, 16 | 16 | H; TENREG ON IN
R13 10K
R14 10K
*2 R39 1K
R15 330
*2 R40 1K
R16 330
D9 10E-2
D10 RD15FB3
SOL. COMMON (UNREG 12V) | 10 | SY-22, 10
L; TENREG SOL. OFF OUT | 8 | SY-22, 8
L; TENREG SOL. ON OUT | 9 | SY-22, 9
Q25 DTA114YK Q28 DTC144EK Q30 2SD1160
Q24 DTC144EK Q26 2SD1160 Q27 DTC144EK Q29 DTA114YK
S-BRAKE SOL DRIVER
SY-22, 22 | 22 | +12V IN
SY-22, 24 | 24 | H; S-BRAKE OFF IN
SY-22, 26 | 26 | H; S-BRAKE ON IN
SY-22, 27 | 27 | H; UNREG DIP DET OUT
D11 ERA81-004
D12; 1S2837
R17 10K
R18 10K
*2 R41 1K
R20 330
R21 1K
*2 R42 1K
R22 330
D13 10E-2
D14 RD15FB3
S-BRAKE SOL. COMMON | 31 | SY-22, 31
L; S-BRAKE SOL. OFF OUT | 32 | SY-22, 32
L; S-BRAKE SOL. ON OUT | 33 | SY-22, 33
Q43 DTA114YK
D20 1S2837
*2 R32 470
C2 47 16V
R34 4700
C3 3.3 25V
R31 10K
Q32 DTA114YK Q35 DTA114YK
Q31 DTC144EK Q33 2SD1160 Q34 DTC144EK Q36 2SD1160
T-IDLER SOL DRIVER
SY-22, 20 | 20 | H; T-IDLER OFF IN
SY-22, 21 | 21 | H; T-IDLER ON IN
R23 10K
R24 10K
*2 R43 1K
R25 330
*2 R44 1K
R26 330
D15 10E-2
D16 RD15FB3
L; T-IDLER SOL. OFF OUT | 11 | SY-22, 11
L; T-IDLER SOL. ON OUT | 12 | SY-22, 12
DTC114EK
DTA114YK
Q38 DTA114YK Q41 DTA114YK
Q37 DTC144EK Q39 2SD1160 Q40 DTC144EK Q42 2SD1160
S-IDLER SOL DRIVER
SY-22, 23 | 23 | H; S-IDLER OFF IN
SY-22, 19 | 19 | H; S-IDLER ON IN
R27 10K
R28 10K
*2 R45 1K
R29 330
*2 R46 1K
R30 330
D17 10E-2
D18 RD15FB3
SOL. COMMON (UNREG 12V) | 28 | SY-22, 28
L; S-IDLER SOL. OFF OUT | 29 | SY-22, 29
L; S-IDLER SOL. ON OUT | 30 | SY-22, 30
IC1 IC2
TC4050BFx2
VCC 1 GND
VCC 2 GND
SY-22, 1 | 1 | UNSW +5V IN
SY-22, 2 | 2 | GND
C1 0.047
UNREG GND | 37 | SY-22, 37
UNREG GND | 38 | SY-22, 38
SY-23
1-613-101-12, 13, 14, 15
VO-6800
VO-6800PS

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
*1	R33 100K ADDED	UC; 10631 AND LATER J ; 10261 AND LATER EK; 10521 AND LATER
*2	R32 100 → 470 R35, 36, 37, 38, 39, 40 41, 42, 43, 44, 45, 46) 1K ADDED	UC; 12781 AND LATER J ; 10561 AND LATER EK; 11971 AND LATER

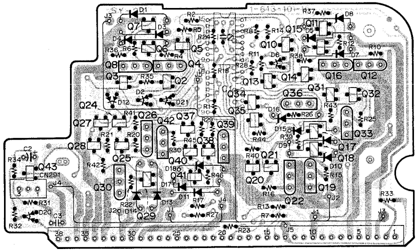
S/N 10031 TO 12780 (UC)
S/N 10011 TO 10560 (J)

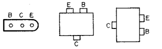

SY-23
1-613-101-12
D1 D3 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18 D20 D21 D2
Q3 Q4 Q5 Q6 Q7 Q8 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43
IC1 IC2
CN291
C2 C3
J2 J4
38 35 30 25 20 15 10 5 1



SY-23 -SOLDERING SIDE-
1-613-101-12
VO-6800
VO-6800PS

S/N 12781 AND LATER (UC)
S/N 10561 AND LATER (J)

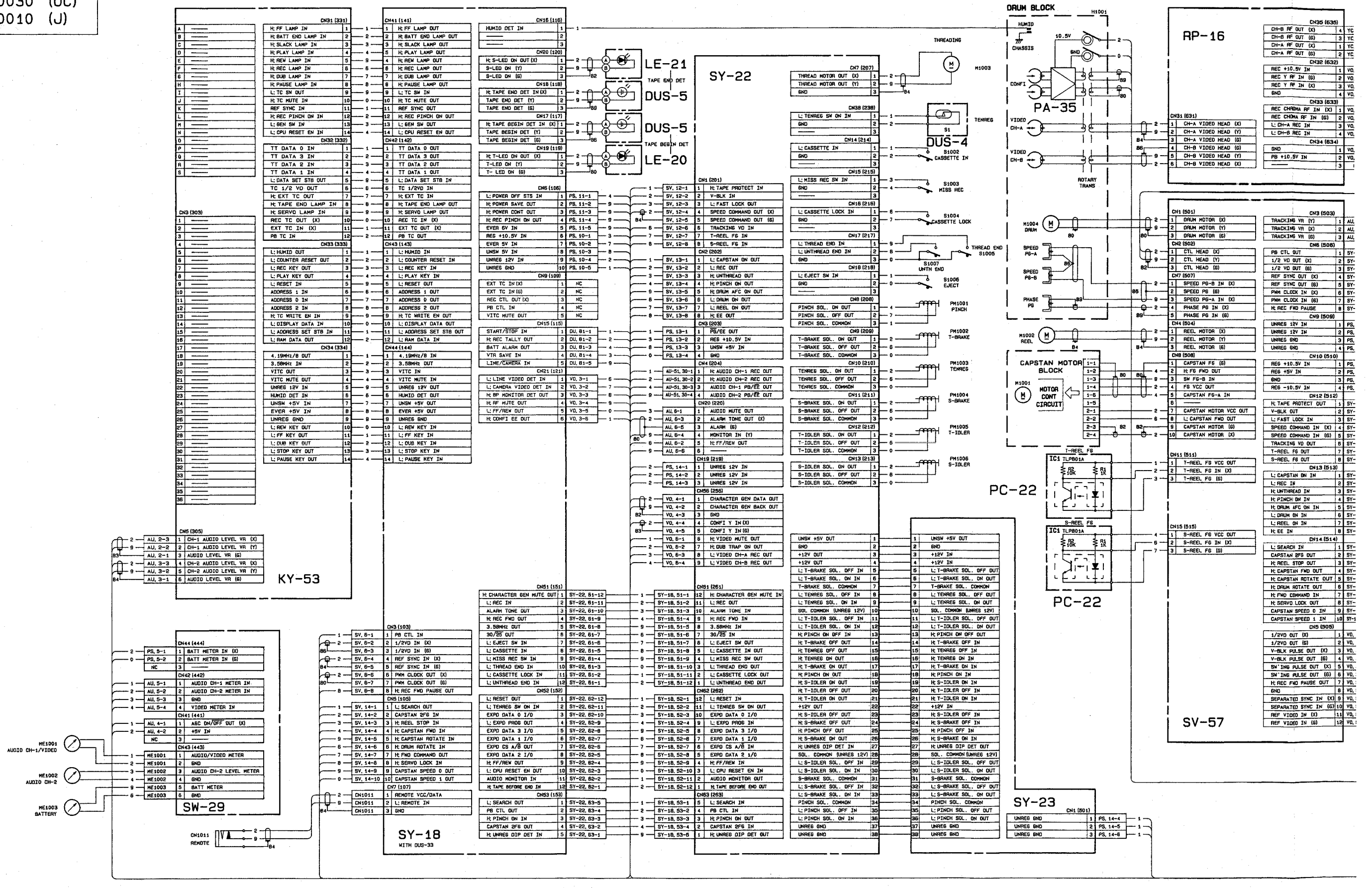

SY-23
1-613-101-15
J3 J4 J5 J2
D1 D3 D4 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18 D20 D21
Q3 Q5 Q6 Q7 Q8 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43
CN291
C2 C3
38 35 30 25 20 15 10 5 1



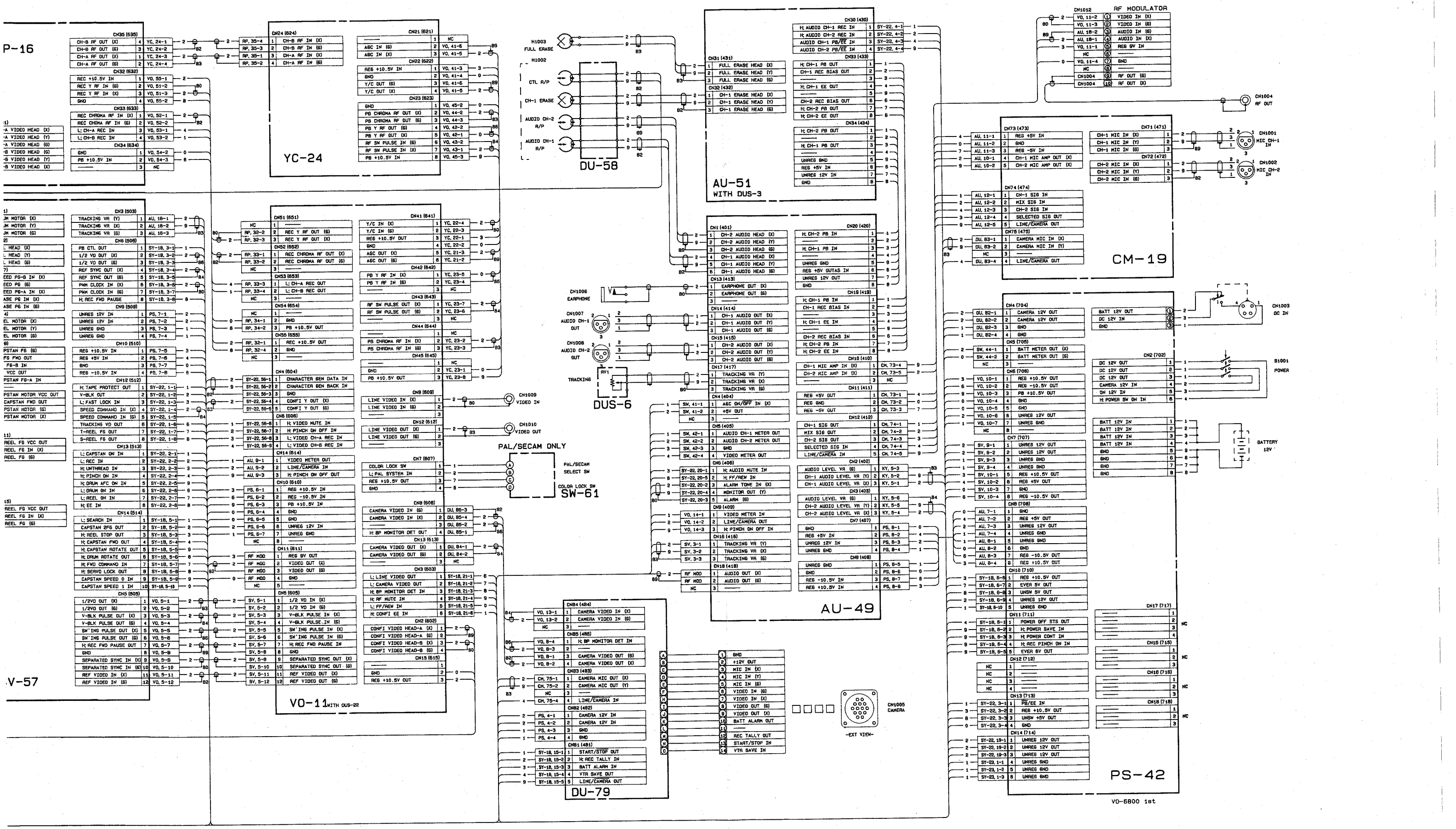
SY-23 -SOLDERING SIDE-
1-613-101-15
VO-6800
VO-6800PS

FRAME

S/N 10001 TO 10030 (UC)
S/N 10001 TO 10010 (J)


KY-53
SY-18
WITH DUS-33
SW-29
LE-21
DUS-5
DUS-5
LE-20
TAPE END DET
TAPE BEGIN DET
SY-22
DUS-4
SY-23
DRUM BLOCK
PA-35
ROTARY TRANS
CAPSTAN MOTOR BLOCK
MOTOR CONT CIRCUIT
PC-22
PC-22
RP-16
SV-57
THREADING
M1003
M1004 DRUM
M1002 REEL
M1001
TENREG
S1002 CASSETTE IN
S1003 MISS REC
S1004 CASSETTE LOCK
S1005 THREAD END
S1007 UNTH END
S1006 EJECT
PM1001 PINCH
PM1002 T-BRAKE
PM1003 TENREG
PM1004 S-BRAKE
PM1005 T-IDLER
PM1006 S-IDLER
ME1001 AUDIO CH-1/VIDEO
ME1002 AUDIO CH-2
ME1003 BATTERY
CN1011 REMOTE

FRAME FRAME

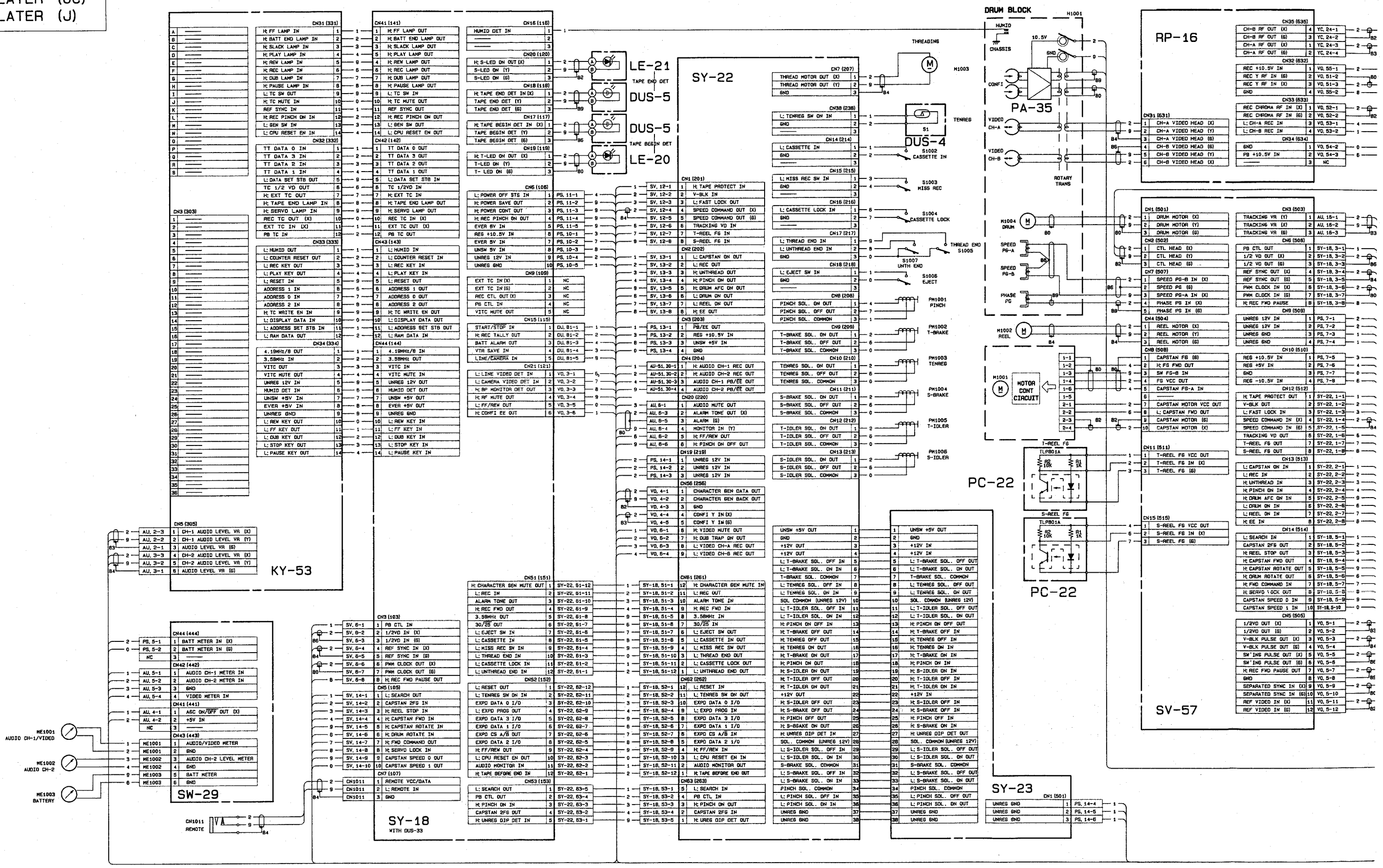

P-16
YC-24
V-57
VO-11 WITH DUS-22
DU-58
H1003 FULL ERASE
H1002
CTL R/P
CH-1 ERASE
AUDIO CH-2 R/P
AUDIO CH-1 R/P
AU-51 WITH DUS-3
RF MODULATOR
CN1004 RF OUT
CN1001 MIC CH-1 IN
CN1002 MIC CH-2 IN
CM-19
CN1006 EARPHONE
CN1007 AUDIO CH-1 OUT
CN1008 AUDIO CH-2 OUT
TRACKING
RV1
DUS-6
AU-49
CN1009 VIDEO IN
CN1010 VIDEO OUT
PAL/SECAM ONLY
PAL/SECAM SELECT SW
COLOR LOCK SW
SW-61
CN1003 DC IN
S1001 POWER
BATTERY 12V
DU-79
CN1005 CAMERA
-EXT VIEW-
PS-42

VO-5800 1st

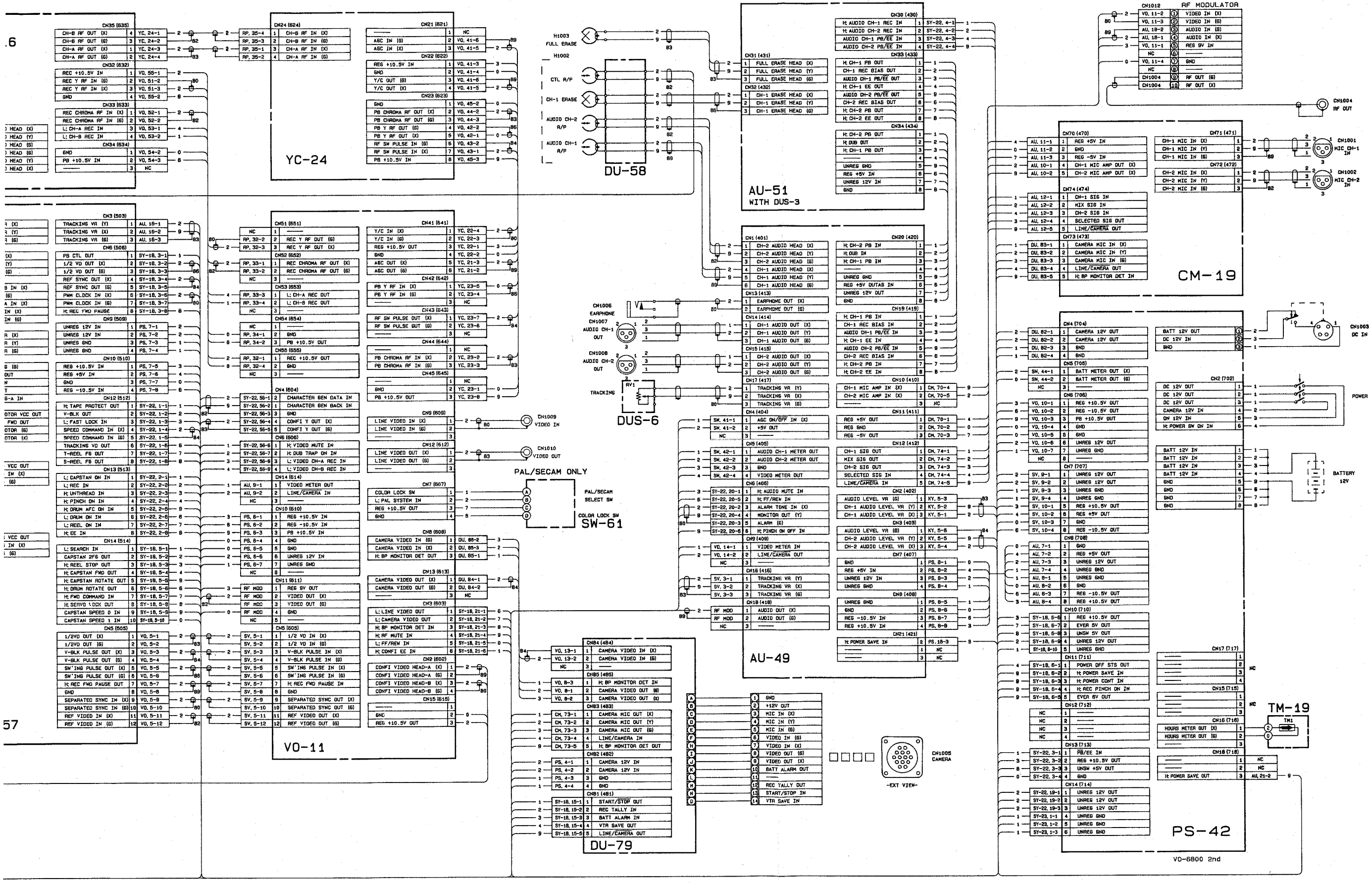
FRAME FRAME

FRAME

S/N 10031 AND LATER (UC)
S/N 10011 AND LATER (J)


KY-53
SW-29
SY-18
WITH DUS-33
SY-22
LE-21
TAPE END DET
DUS-5
DUS-5
TAPE BEGIN DET
LE-20
DUS-4
THREADING
M1003
TENREG
S1002
CASSETTE IN
S1003
MISS REC
S1004
CASSETTE LOCK
S1007
UNTH END
THREAD END
S1005
S1006
EJECT
PM1001
PINCH
PM1002
T-BRAKE
PM1003
TENREG
PM1004
S-BRAKE
PM1005
T-IDLER
PM1006
S-IDLER
DRUM BLOCK
H1001
HUMID
CHASSIS
PA-35
CONFI
VIDEO CH-A
VIDEO CH-B
ROTARY TRANS
M1004
DRUM
SPEED PG-A
SPEED PG-B
PHASE PG
M1002
REEL
M1001
MOTOR CONT CIRCUIT
T-REEL FG
TLP801A
PC-22
S-REEL FG
TLP801A
PC-22
RP-16
SV-57
SY-23
ME1001
AUDIO CH-1/VIDEO
ME1002
AUDIO CH-2
ME1003
BATTERY
CN1011
REMOTE

FRAME FRAME



YC-24
VO-11
DU-58
AU-51
WITH DUS-3
AU-49
DUS-6
SW-61
PAL/SECAM ONLY
PAL/SECAM SELECT SW
COLOR LOCK SW
DU-79
CM-19
PS-42
TM-19
RF MODULATOR
H1003 FULL ERASE
H1002
CTL R/P
CH-1 ERASE
AUDIO CH-2 R/P
AUDIO CH-1 R/P
CN1006 EARPHONE
CN1007 AUDIO CH-1 OUT
CN1008 AUDIO CH-2 OUT
TRACKING
RV1
CN1009 VIDEO IN
CN1010 VIDEO OUT
CN1005 CAMERA
-EXT VIEW-
CN1004 RF OUT
CN1001 MIC CH-1 IN
CN1002 MIC CH-2 IN
CN1003 DC IN
POWER
BATTERY 12V
TM1
VO-6800 2nd

SECTION 15
SPARE PARTS AND FIXTURE

15-1. PARTS INFORMATION

(1) Safety Related Components Warning.
Components identified by shading and marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.
Replace these components with the Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

(2) Replacement Parts supplied from the Sony Parts Center will sometimes have a different shape from the original parts. This is due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".
This manual's exploded views and electrical spare parts list indicate the part numbers of "the standardized genuine parts at the present". Regarding engineering part changes in out engineering department, refer to Sony service bulletins and service manual supplements.

(3) The parts marked with "s" in the SP column of the exploded views and electrical spare parts list are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

(4) Item with no part number and/or no description are not stocked because they are seldom required for routine service.

(5) (T) after a spring description is shown on the exploded views in order to indicate the number of a spring turn required for the use.
(Example)
Spring, tension (24T); This spring must be cut at its 24th turn for actual use.

15-2. EXPLODED VIEW

. Exploded views are composed of the following blocks.

(1) Reel Chassis Block (1) (take-up side)
take-up reel table
take-up side brake shoe
mis-recording switch
brake solenoid
eject lever

(2) Reel Chassis Block (2) (supply side)
supply reel table
supply side brake shoe
tension regulator
cassette in switch
brake solenoid
tension solenoid

(3) Reel Chassis Block (3) (driving block)
idler tire
idler solenoid

(4) Reel Chassis Block (4) (back side)
drum motor
reel motor
drive belt
cassette-lock back
printed circuit board

(5) T.U Arm and Ring Stopper Blocks
T.U arm
tape end detector
ring stopper

(6) Threading Motor Block
threading motor

(7) Pinch Pressure Block
pinch solenoid
pinch pressure mechanism

(8) Threading Ring Block
threading ring

(9) Head Drum, Stationary Head and Tape Guide Blocks
- head drum
- rotary upper drum
- capstan motor
- full erase head
- audio/CTL head
- tape guides
- tape beginning sensor

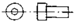
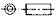
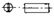
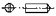
(10) Cassette-up Compartment Block
- cassette-up compartment

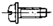
(11) Connector Panel and Audio Board Blocks
- connector panel
- audio systm circuit board

(12) Printed Circuit Board and Frame Blocks
- printed circuit board
- RF case
- frame chassis

(13) Front Panel and Function Key Boards
- front panel
- level meter
- function key board

(14) Ornamental Panel Block
- upper case
- lower case
- cassette-up compartment lid

	HEXAGON SOCKET SCREW 	HEXAGON SET SCREW 	(–) SET SCREW FLAT POINT 	(–) SET SCREW CONE POINT 
2.6 x 3	———	7-621-734-09	———	———
2.6 x 4	7-621-996-24	7-621-735-09	———	———
2.6 x 5	———	7-621-736-09	———	———
2.6 x 6	7-683-412-05	———	———	7-621-712-55
2.6 x 8	7-683-413-05	———	———	7-621-712-65
2.6 x 10	———	———	———	7-621-712-75
3 x 4	———	7-683-238-01	———	———
3 x 5	———	———	7-683-175-01	———
3 x 6	7-683-403-04	———	7-683-176-01	7-683-176-21
3 x 8	7-683-404-04	———	———	7-683-177-21
3 x 10	7-683-405-04	———	———	7-683-178-21
3 x 12	———	———	———	7-683-179-21

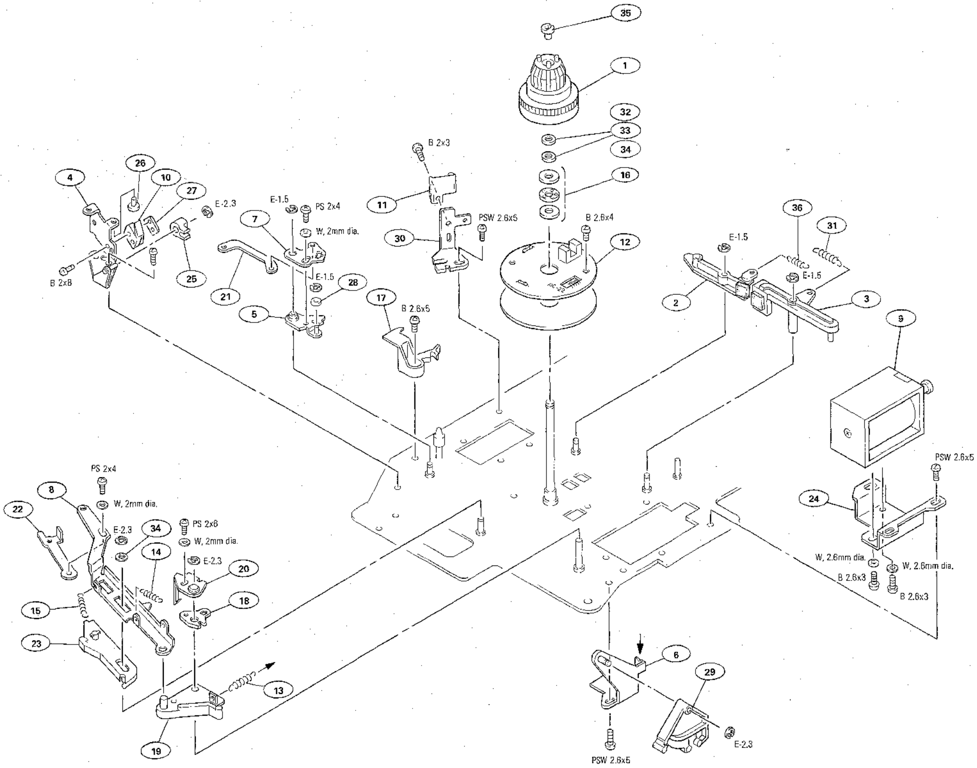
	PS	PSW	B (BZn-N)	B (Cr-N)	PTT	PTTWH 
2.6 x 4	7-621-972-05	———	7-621-912-10	7-621-912-18	———	7-687-508-31
2.6 x 6	7-621-972-25	7-621-981-15	7-621-912-30	7-621-912-38	———	7-687-501-31
2.6 x 8	7-621-972-35	7-621-981-25	7-621-912-40	7-621-912-48	———	7-687-502-31
2.6 x 10	7-621-972-45	7-621-981-35	7-621-912-50	7-621-912-58	———	7-687-503-31
2.6 x 12	7-621-972-55	7-621-981-45	7-621-912-60	7-621-912-68	———	7-687-504-31
2.6 x 14	7-621-972-65	7-621-981-55	7-621-912-70	7-621-912-78	———	7-687-505-31
2.6 x 16	7-621-972-75	7-621-981-65	7-621-912-80	7-621-912-88	———	7-687-506-31
2.6 x 20	7-621-972-85	7-621-981-75	7-621-912-90	7-621-912-98	———	7-687-507-31
3 x 5	7-686-446-01	———	———	———	———	———
3 x 6	7-686-447-01	7-686-527-01	7-686-624-09	7-686-624-04	7-687-411-31	7-687-510-31
3 x 8	7-686-448-01	7-686-528-01	7-686-625-09	7-686-625-04	7-687-412-31	7-687-511-31
3 x 10	7-686-449-01	7-686-529-01	7-686-626-09	7-686-626-04	7-687-413-31	7-687-512-31
3 x 12	7-686-450-01	7-686-530-01	7-686-627-09	7-686-627-04	7-687-414-31	7-687-513-31
3 x 16	7-686-452-01	7-686-532-01	7-686-629-09	7-686-629-04	———	———
3 x 20	7-686-453-01	7-686-533-01	7-686-630-09	7-686-630-04	———	———
3 x 25	7-686-454-01	7-686-534-01	7-686-631-09	7-686-631-04		
4 x 8	7-686-468-01	7-686-548-01	7-686-635-09	7-686-635-04	———	———
4 x 12	7-686-470-01	7-686-550-01	7-686-637-09	7-686-637-04	———	———
4 x 14	7-686-471-01	———	7-686-638-09	7-686-638-04	———	———
4 x 16	7-686-472-01	———	7-686-639-09	7-686-639-04	———	———
4 x 20	7-686-473-01	———	7-686-640-09	7-686-640-04	———	———

WASHER

	FLAT WASHER SMALL W.	FLAT WASHER MIDDLE W.	SPRING WASHER SW.	TOOTHED WASHER TYPE B LW.	HEXAGON NUT N.
2.6 mm	7-688-002-01	7-688-002-12	7-623-207-22	7-623-421-07	7-622-207-05
3 mm	7-688-003-01	7-688-003-12	7-688-003-11	7-623-422-07	7-684-023-04
4 mm	7-688-004-01	7-688-004-12	7-623-210-22	7-623-423-07	7-684-024-04
5 mm	7-688-005-01	7-688-005-01	7-623-212-22	———	7-684-025-04

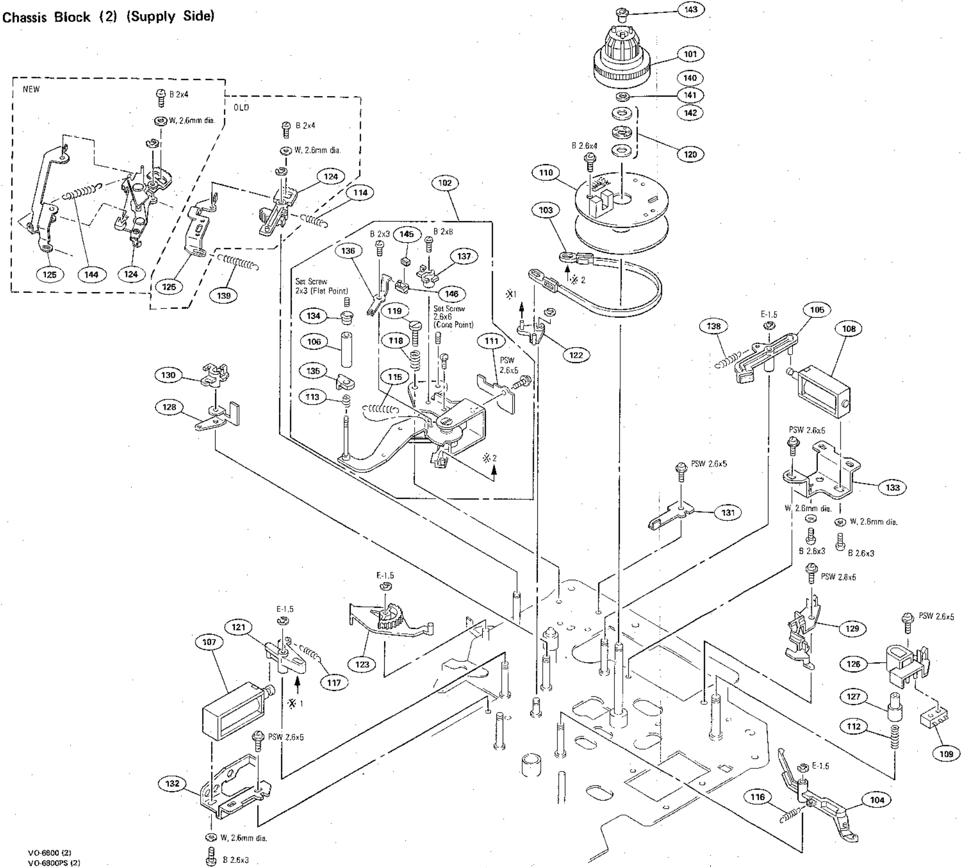
	STOP RING E TYPE E.
2	7-624-104-04
2.3	7-624-105-04
3	7-624-106-04
4	7-624-108-04
5	7-624-109-04
6	7-624-110-04

Reel Chassis Block (1) (Take-up Side)


35
1
32
33
34
16
12
B 2.6x4
B 2x3
11
30
PSW 2.6x5
4
26
10
27
E-2.3
B 2x8
25
E-1.5
PS 2x4
W, 2mm dia.
7
21
E-1.5
28
5
17
B 2.6x5
36
31
E-1.5
E-1.5
2
3
9
PSW 2.6x5
24
W, 2.6mm dia.
B 2.6x3
W, 2.6mm dia.
B 2.6x3
PS 2x4
8
22
W, 2mm dia.
E-2.3
34
14
PS 2x6
W, 2mm dia.
E-2.3
20
18
15
23
13
19
6
29
E-2.3
PSW 2.6x5

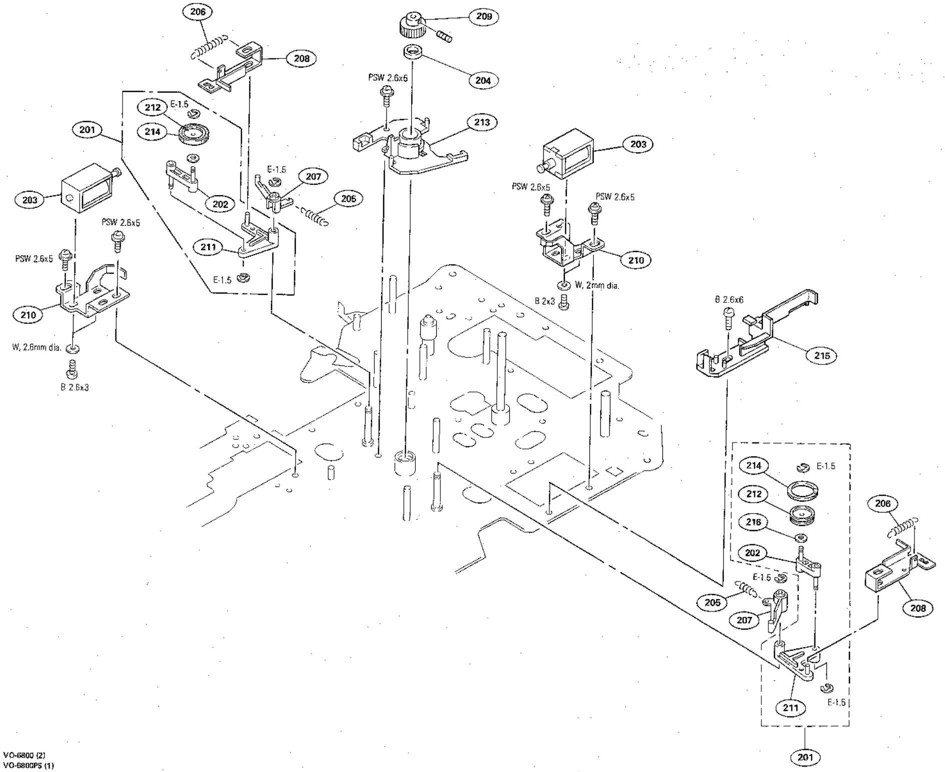
No.	Parts No.	SP	Description
1	A-6739-034-A	s	TABLE ASSY, REEL
2	X-3685-818-2	s	ARM ASSY, T SOFT BRAKE
3	X-3685-819-2	s	ARM ASSY, BRAKE
4	X-3685-829-1	o	BASE ASSY, MISS RECORDING
5	X-3685-830-1	o	RING ASSY, SLIDE STOPPER
6	X-3685-831-1	o	HOLDER ASSY, VH RING
7	X-3685-833-1	o	PLATE ASSY, ADJUSTMENT, LINK
8	X-3685-838-1	o	SLIDER ASSY, E
9	1-454-383-11	s	SOLENOID, PLUNGER
10	1-570-028-11	s	SWITCH, MICRO
11	1-611-957-11	o	PRINTED CIRCUIT BOARD, LE-21
12	1-611-960-11	o	PRINTEC CIRCUIT BOARD, PC-22
13	3-465-158-XX	s	SPRING, TENSION (16T)
14	3-567-029-00	s	SPRING, TENSION
15	3-573-930-00	s	SPRING, TENSION
16	3-676-322-00	s	BEARING, THRUST
17	3-685-802-01	o	GUIDE, PINCH ROLLER
18	3-685-809-01	o	PLATE, ADJUSTMENT, E. SWITCH
19	3-685-810-01	o	LINK, REPLACEMENT, H
20	3-685-811-01	s	ACTUATOR, E SWITCH
21	3-685-812-01	o	JOINT, KM
22	3-685-813-01	o	JOINT, SLIDER, E
23	3-685-814-01	s	PRESSURE, E
24	3-685-832-01	o	BASE, B-SOL
25	3-685-850-01	o	LEVER, RELEASE, C LOCK
26	3-685-851-01	o	SHAFT, MS
27	3-685-852-01	o	NUT (M2), PLATE
28	3-685-860-01	s	ROLLER, E STOPPER
29	3-685-864-01	o	LINK, VH CHANGE
30	3-685-867-01	o	PLATE, S-LED
31	3-686-070-01	s	SPRING, TENSION
32	3-701-439-01	s	WASHER, POLY 3MM DIA., 0.13T
33	3-701-439-11	s	WASHER, POLY 3MM DIA., 0.25T
34	3-701-439-21	s	WASHER, POLY 3MM DIA., 0.5T
35	3-703-074-00	s	CAP 3, SHAFT
36	4-847-057-00	s	SPRING, TENSION

Reel Chassis Block (2) (Supply Side)


NEW
OLD
B 2x4
W, 2.6mm dia.
B 2x4
W, 2.6mm dia.
124
114
125
144
124
125
139
102
B 2x3
145
B 2x8
136
137
146
Set Screw 2x3 (Flat Point)
134
119
Set Screw 2.6x6 (Cone Point)
106
118
111
PSW 2.6x5
135
115
113
※2
※1
143
101
140
141
142
120
B 2.6x4
110
103
※2
122
130
128
138
E-1.5
105
108
PSW 2.6x5
PSW 2.6x5
133
131
W, 2.6mm dia.
W, 2.6mm dia.
B 2.6x3
B 2.6x3
PSW 2.6x5
E-1.5
121
107
E-1.5
123
117
※1
129
PSW 2.6x5
126
127
112
109
PSW 2.6x5
132
E-1.5
116
104
W, 2.6mm dia.
B 2.6x3

No.	Parts No.	SP	Description
101	A-6739-034-A	s	TABLE ASSY, REEL
102	A-6742-055-A	s	TENSION REGULATOR ASSY
103	X-3685-814-4	s	BAND ASSY, TENSION REGULATOR
104	X-3685-817-2	s	ARM ASSY, S SOFT BRAKE
105	X-3685-819-2	s	ARM ASSY, BRAKE
106	X-3685-820-1	s	ROLLER ASSY, T.R
107	1-454-382-11	s	SOLENOID, PLUNGER
108	1-454-383-11	s	SOLENOID, PLUNGER
109	1-570-028-21	s	SWITCH, MICRO
110	1-611-960-11	o	PRINTED CIRCUIT BOARD, PC-22
111	1-611-963-11	o	PRINTED CIRCUIT BOARD, DUS-4
112	2-527-096-00	s	SPRING, COMPRESSION
113	3-305-432-00	s	SPRING, COMPRESSION
114	3-424-031-00	s	SPRING, RECORD SLIDER
115	4-812-499-XX	s	SPRING, TENSION (15T) .If this part is replaced, check that R212/SV-57 board is 240K ohms (metal)
116	3-508-108-XX	s	SPRING, TENSION (17T)
117	3-533-373-00	s	SPRING, TENSION
118	3-534-237-00	s	SPRING, COMPRESSION
119	3-650-191-11	s	SCREW, LOCK
120	3-676-322-00	s	BEARING, THRUST
121	3-685-815-01	o	ARM (A), RELEASE, T.R (U/C: UP TO S/N 12280) (PS: UP TO S/N 11970)
	3-685-815-02	o	ARM (A), RELEASE, T.R (U/C: S/N 12281 AND HIGHER) (PS: S/N 11971 AND HIGHER)
122	3-685-816-01	o	ARM (B), RELEASE, T.R
123	3-685-817-01	o	ARM (A), DRAWER, T.R
124	3-685-818-01	o	ARM (B), DRAWER, T.R (U/C: UP TO S/N 13480) (PS: UP TO S/N 12170)
	X-3685-866-1		ARM SUB ASSY, TR DRAWER (U/C: S/N 13481 AND HIGHER) (PS: S/N 12171 AND HIGHER)
125	3-685-819-01	o	ARM (C), DRAWER, T.R (U/C: UP TO S/N 13480) (PS: UP TO S/N 12170)
	X-3685-865-1		ARM (C), ASSY, T.R DRAWER (U/C: S/N 13481 AND HIGHER) (PS: S/N 12171 AND HIGHER)
126	3-685-820-01	o	COVER, SWITCH
127	3-685-821-01	o	PIN, SWITCH
128	3-685-826-01	s	ARM, RELEASE, S SOFT
129	3-685-827-01	o	HOLDER, BAND
130	3-685-828-01	o	COVER, SHAFT
131	3-685-829-03	o	STOPPER, TENSION REGULATOR
132	3-685-831-01	o	BASE, T.R.SOL
133	3-685-832-01	o	BASE, B-SOL
134	3-685-839-01	s	NUT, ADJUSTMENT, T.R
135	3-685-840-01	s	FLANGE (LOWER), T.R
136	3-685-842-01	o	ARM, MAGNET
137	3-685-999-01	o	HOLDER, SPRING
138	3-686-070-01	s	SPRING, TENSION
139	3-686-071-02	s	SPRING, TENSION
140	3-701-439-01	s	WASHER, POLY 3MM DIA., 0.13T
141	3-701-439-11	s	WASHER, POLY 3MM DIA., 0.25T
142	3-701-439-21	s	WASHER, POLY 3MM DIA., 0.5T
143	3-703-074-00	s	CAP, 3, SHAFT
144	3-672-461-00	s	SPRING, TENTION (U/C: S/N 13481 AND HIGHER) (P/S: S/N 12171 AND HIGHER)
145	1-452-238-11	o	MAGNET, FIXED
146	3-676-063-01	o	HOLDER, MAGNET

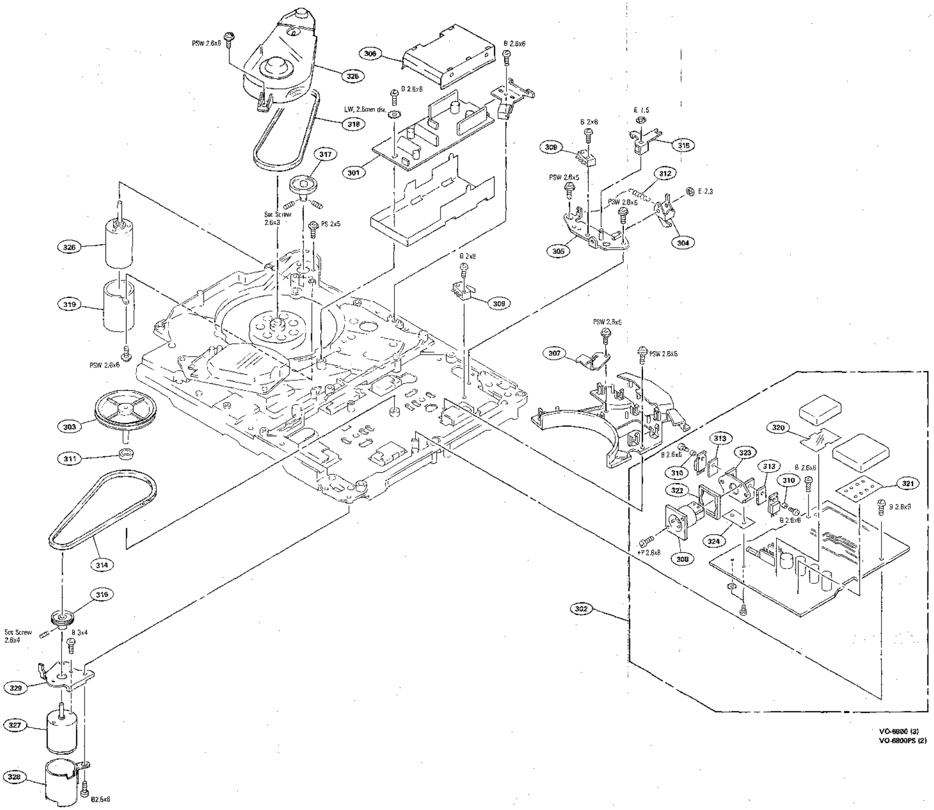
Reel Chassis Block (3) (Driving Block)


206
208
209
204
PSW 2.6x5
213
212
E-1.5
214
201
E-1.5
207
205
203
202
203
PSW 2.6x5
PSW 2.6x5
PSW 2.6x5
PSW 2.6x5
211
PSW 2.6x5
210
E-1.5
W, 2mm dia.
B 2x3
210
W, 2.6mm dia.
B 2.6x3
B 2.6x6
215
214
E-1.5
212
206
216
202
E-1.5
205
207
208
211
E-1.5
201

VO-6800 (2)
VO-6800PS (1)

No.	Parts No.	SP	Description
201	A-6740-084-A	o	IDLER ASSY
202	X-3685-813-1	o	ARM ASSY, IDLER
203	1-454-381-11	s	SOLENOID, PLUNGER
204	3-154-507-02	s	BEARING, BALL
205	3-537-783-XX	s	SPRING, TENSION (18T)
206	4-812-499-XX	s	SPRING, TENSION (15T) .If this part is replaced, check that R212/SV-57 board is 240K ohms (metal).
207	3-685-822-01	o	ARM, IDLER RELEASE
208	3-685-823-01	o	PLATE, PRESS, IDLER
209	3-685-824-01	o	PULLEY, MIDWAY
210	3-685-833-01	o	BASE, I-SOL
211	3-685-835-01	s	ARM (B), IDLER
212	3-685-836-01	o	PULLEY, IDLER
213	3-685-972-01	o	RETAINER, IDLER
214	3-687-902-01	s	TIRE, IDLER
215	3-687-903-01	o	HOLDER, H.M
216	3-701-437-21	s	WASHER, POLY 2MM DIA., 0.5T

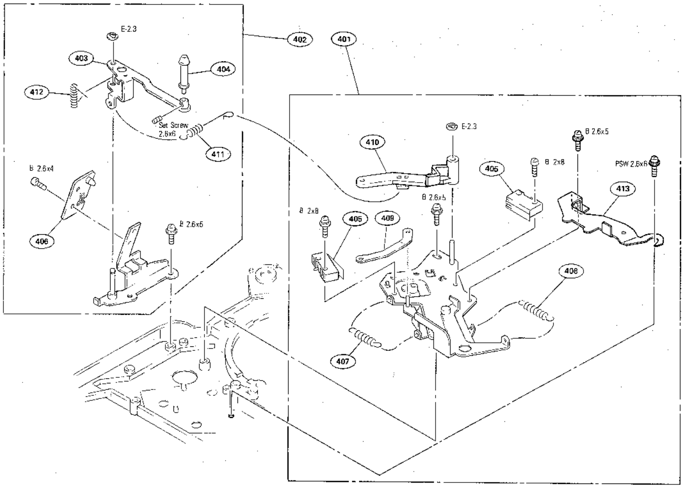
Reel Chassis Block (4) (Back Side)


PSW 2.6x6
325
306
B 2.6x6
B 2.6x6
LW, 2.6mm dia.
318
317
301
E 1.5
B 2x8
309
315
312
PSW 2.6x5
E 2.3
PSW 2.6x5
304
305
Set Screw
2.6x3
PS 2x5
326
B 2x8
309
319
PSW 2.6x6
PSW 2.6x5
307
PSW 2.6x5
303
320
311
313
B 2.6x6
323
310
313
B 2.6x6
310
321
322
B 2.6x6
B 2.6x6
324
+P 2.6x8
308
314
316
302
Set Screw
2.6x4
B 3x4
329
327
328
B2.6x6

VO-6800 (3)
VO-6800PS (2)

No.	Parts No.	SP	Description
301	A-6711-550-A	o	MOUNTED CIRCUIT BOARD, RP-16
302	A-6723-249-A	o	MOUNTED CIRCUIT BOARD, PS-42
303	X-3685-810-1	s	PULLEY ASSY, RELAY
304	X-3685-827-1	o	ARM ASSY, C LOCK
305	X-3685-828-1	o	BRACKET ASSY, C LOCK ARM
306	X-3685-864-1	o	PLATE, (B)ASSY, SHIELD, RP
307	3-687-947-01	o	PLATE, ELECTROSTATIC
308	1-560-999-11	s	CONNECTOR (WITH SW)
309	1-570-028-21	s	SWITCH, MICRO
310	2-832-007-00	s	BUSHING (K), INSULATING
311	3-154-507-02	s	BEARING, BALL
312	3-571-819-00	s	SPRING, TENSION
313	3-660-978-00	s	SHEET, HEAT RESISTING
314	3-685-803-02	s	BELT, REEL
315	3-685-855-01	o	LEVER, SWITCH, LOCK
316	3-685-902-02	s	PULLEY, MOTOR
317	3-686-016-01	s	PULLEY, D MOTOR
318	3-686-017-01	s	BELT, DRUM
319	3-686-044-01	o	PLATE, SHIELD, M
320	3-686-046-01	o	SHEET, INSULATING, BM
321	3-686-048-01	o	SHEET, INSULATING
322	3-682-918-01	o	SPACER, (A), XLR
323	3-686-051-03	o	BRACKET, DC IN
324	3-686-053-01	o	SHEET, INSULATING, HEAT SINK
325	3-686-095-03	o	COVER, D PULLEY
326	8-835-030-01	s	MOTOR, DC (MNR-2900A)
327	8-835-123-01	s	MOTOR, DC (MNR-7400A)
328	3-687-921-01	o	CASE, SHIELD
329	3-685-901-04	o	BASE, MOTOR

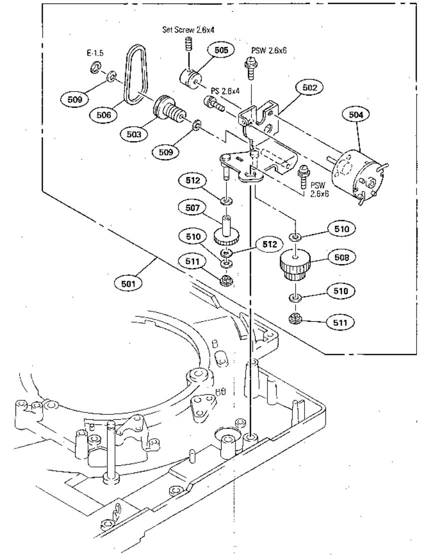
T.U Arm and Ring Stopper Blocks


E-2.3
403
404
412
402
401
Set Screw 2.6x6
411
B 2.6x4
406
B 2.6x5
E-2.3
410
B 2.6x5
405
B 2x8
PSW 2.6x6
413
B 2.6x5
B 2x8
405
409
408
407

VO-6800 (2)
VO-6800PS (2)

No.	Parts No.	SP	Description
401	A-6744-016-G	o	STOPPER ASSY, RING
402	A-6746-038-A	o	ARM ASSY, TU
403	X-3685-824-3	o	ARM ASSY, T
404	X-3685-858-2	s	ROLLER ASSY, T GUIDE
405	1-570-028-11	s	SWITCH, MICRO
406	1-611-956-11	o	PRINTED CIRCUIT BOARD, LF-20
407	3-515-170-00	s	SPRING, TENSION
408	3-535-369-XX	s	SPRING, TENSION (12T)
409	3-685-812-01	o	JOINT, KM
410	3-685-903-03	s	ARM, DRAWER
411	3-686-005-04	s	SPRING, TENSION
412	3-686-006-01	s	SPRING
413	3-687-964-01	o	GUID,OTS (U/C: UP TO S/N 14280) (P/S: UP TO S/N 14220)

Threading Motor Block


Set Screw 2.6x4
505
PSW 2.6x6
E-1.5
509
506
503
PS 2.6x4
502
504
509
512
PSW 2.6x6
507
510
512
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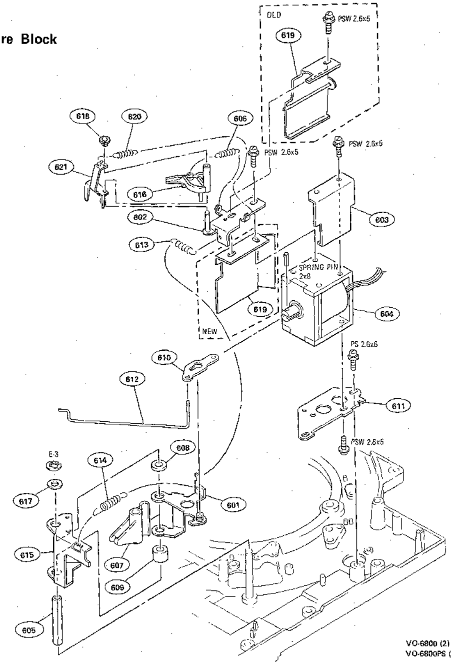
VO-6800 (2)
VO-6800PS (2)

No.	Parts No.	SP	Description
501	A-6737-138-D	o	GEAR ASSY, LD
502	X-3685-845-2	o	BASE ASSY, LD GEAR
503	X-3685-851-2	s	GEAR ASSY, WORM
504	1-541-163-00	s	MOTOR
505	3-686-009-02	s	PULLEY, LD
506	3-686-010-03	s	BELT, LD
507	3-686-011-01	s	GEAR, THREADING
508	3-686-012-01	s	GEAR, DRIVE
509	3-701-437-11	s	WASHER, POLY 2MM DIA., 0.25T
510	3-701-439-21	s	WASHER, POLY 3MM DIA., 0.5T
511	3-703-074-00	s	CAP 3, SHAFT
512	3-701-439-11	s	WASHER, POLY 3MM DIA., 0.25T

Pinch Pressure Block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619
604
NEW
PS 2.6x6
610
612
611
PSW 2.6x5
E-3
614
608
617
601
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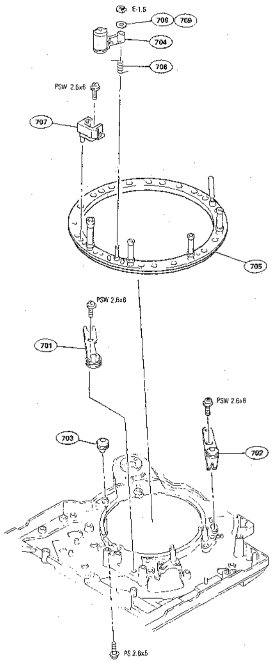
607
609
605

VO-6800 (2)
VO-6800PS (2)

No.	Parts No.	SP	Description
601	X-3685-822-1	o	LEVER ASSY, CHARGE
602	X-3685-852-3	o	PLATE ASSY, ADJUSTMENT, S
603	3-687-925-01	o	PLATE, SHIELD P SOL
604	1-454-386-12	s	SOLENOID, PLUNGER
605	3-668-048-21	o	SPACER (DIA. 4x28)
606	3-668-508-11	s	SPRING, TENSION
607	3-685-927-03	s	STOPPER, TAPE
608	3-685-929-01	o	SPACER
609	3-685-929-11	o	SPACER
610	3-685-931-01	o	JOINT
611	3-685-932-01	o	BASE, PINCH (SOL)
612	3-685-998-01	s	JOINT
613	3-686-003-01	s	SPRING, TENSION
614	3-686-004-01	s	SPRING, TENSION
615	3-686-007-01	o	PLATE, PRESS, PINCH
616	3-687-905-01	o	PLATE, J (U/C: UP TO S/N 13480) (PS: UP TO S/N 12170)
	3-687-905-02	o	PLATE, J (U/C: S/N 13481 AND HIGHER) (PS: S/N 12171 AND HIGHER)
617	3-701-441-21	s	WASHER, POLY 4MM DIA., 0.5T
618	3-703-075-00	s	CAP 2, SHAFT
619	3-687-963-01	o	PLATE (2), SHIELD, P SOL (U/C: UP TO S/N 13980) (PS: UP TO S/N 13720)
	3-687-963-03	o	PLATE (2), SHIELD, P SOL (U/C: S/N 13981 AND HIGHER) (PS: S/N 13721 AND HIGHER)
620	3-555-125-00	s	SPRING, TENTION (U/C: S/N 13481 AND HIGHER) (PS: S/N 12171 AND HIGHER)
621	3-687-978-01	o	ARM PM (U/C: S/N 13481 AND HIGHER) (PS: S/N 12171 AND HIGHER)

Threading Ring Block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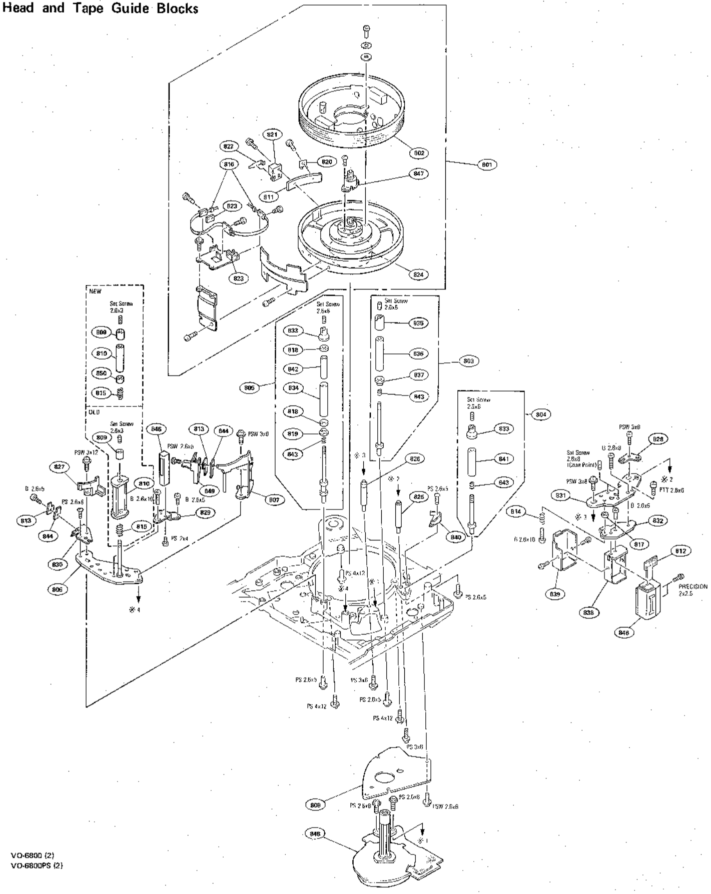
PSW 2.6x8
701
PSW 2.6x8
703
702
PS 2.6x5

VO-6800 (1)
VO-6800PS (1)

No.	Parts No.	SP	Description
701	X-3685-801-1	o	SUPPORT (A) ASSY, R
702	X-3685-802-1	o	SUPPORT (B) ASSY, R
703	X-3685-803-1	o	SUPPORT (C) ASSY, R
704	X-3685-804-1	s	ARM ASSY, P
705	X-3685-809-6	s	RING SUB ASSY, THREADING
706	3-685-934-01	s	SPRING
707	3-685-994-02	o	BASE, TR THREAD
708	3-701-437-02	s	WASHER, POLY 2MM DIA., 0.13T
709	3-701-437-11	s	WASHER, POLY 2MM DIA., 0.25T

Head Drum, Stationary Head and Tape Guide Blocks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PSW 3x8
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PSW 3x12
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830
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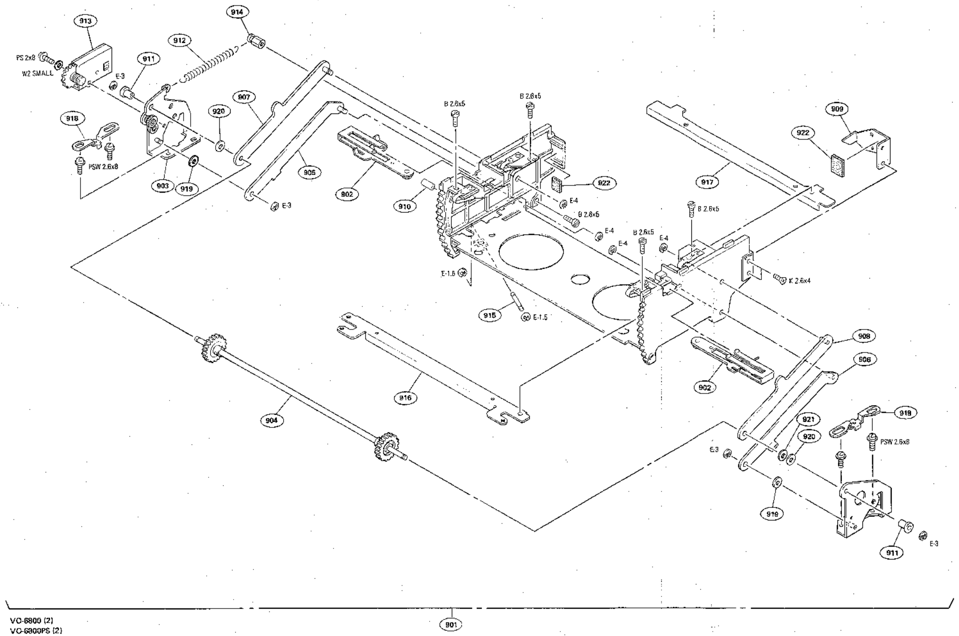
PS 2.6x5
PS 4x12
PS 3x6
PS 2.6x8
PSW 2.6x8
808
※1
※2
※3
※4

No.	Parts No.	SP	Description
801	A-6709-463-A	s	HEAD DRUM ASSY (DUH-28A-R)
802	A-6709-465-A	s	UPPER DRUM ASSY (DUR-28-R)
803	A-6746-039-A	o	TG (4) ASSY
804	A-6746-040-C	o	TG (3) ASSY
805	A-6746-041-A	o	TG (2) ASSY
806	X-3685-808-2	o	BASE (A) ASSY, EN (UP TO S/N 11030)
	X-3685-808-4	o	BASE (A) ASSY, EN (S/N 11031 AND HIGHER)
807	X-3685-811-1	s	LID OPEN SUB ASSY
808	X-3685-844-1	o	PLATE ASSY, SHIELD, CPS
809	3-687-926-01	s	SCREW TG-1 (UP TO S/N 11030)
	3-687-970-01	s	SCREW TG-1 (S/N 11031 AND HIGHER)
810	3-687-927-01	s	FLANGE TG-1 (UP TO S/N 11030)
	3-687-968-01	s	GUIDE TG-1 (S/N 11031 AND HIGHER)
811	1-586-633-00	s	DETECTOR, CONDENSATION
812	1-611-954-11	o	PRINTED CIRCUIT BOARD, DU-58
813	1-611-964-11	o	PRINTED CIRCUIT BOARD, DUS-5
814	3-437-352-00	s	SPRING, COMPRESSION
815	3-565-776-00	s	SPRING, COMPRESSION (UP TO S/N 11030)
	4-868-051-01	s	SPRING, COMPRESSION (S/N 11031 AND HIGHER)
816	3-641-645-00	o	BRUSH
817	3-642-718-00	s	SPACER (2.6x10)
818	3-654-601-00	s	BEARING, BALL
819	3-654-602-00	s	RETAINER, BEARING
820	3-655-631-00	o	TERMINAL, GROUND
821	3-656-501-00	o	HOLDER, TERMINAL
822	3-656-502-00	o	PLATE, TERMINAL
823	3-665-001-00	o	NUT, PLATE
824	3-685-004-01	o	PULLEY, DRUM
825	3-685-804-01	o	SUPPORT (1), EX
826	3-685-805-01	o	SUPPORT (2), EX
827	3-685-806-01	o	RETAINER, TAPE
828	3-685-807-01	o	PLATE, ADJ
829	3-685-896-01	o	BASE, ERASE
830	3-685-897-03	o	BRACKET, T.D
831	3-685-899-01	o	BASE (A), EX
832	3-685-900-01	o	BASE (B), EX
833	3-685-920-01	s	FLANGE, TAPE
834	3-685-921-01	s	GUIDE, TAPE
835	3-685-924-01	s	FLANGE (U), EX
836	3-685-925-01	s	GUIDE, EX
837	3-685-926-01	s	FLANGE (L), EX
838	3-685-978-01	o	CASE, AU
839	3-685-979-01	o	CASE (REAR), AU
840	3-686-001-01	o	RETAINER (2), TAPE
841	3-686-020-03	s	GUIDE, TAPE
842	4-855-006-01	s	SPACER (3x12)
843	4-866-143-00	s	SPRING, COMPRESSION
844	8-719-919-10	s	DIODE 55M22LS
845	8-825-544-20	s	HEAD, ERASE
846	8-825-578-20	s	HEAD, ACE (EPS264-5803)
847	8-825-680-50	s	RING ASSY, SLIP
848	8-838-079-01	s	MOTOR, DC (BHF-1913A)
849	3-687-951-01	o	VISOR, INFRARED RAYS (S/N 10331 AND HIGHER)
850	3-687-969-01	s	FLANGE TG-1 (S/N 11031 AND HIGHER)

Cassette-up Compartment Block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PSW 2.6x8
E-3
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911
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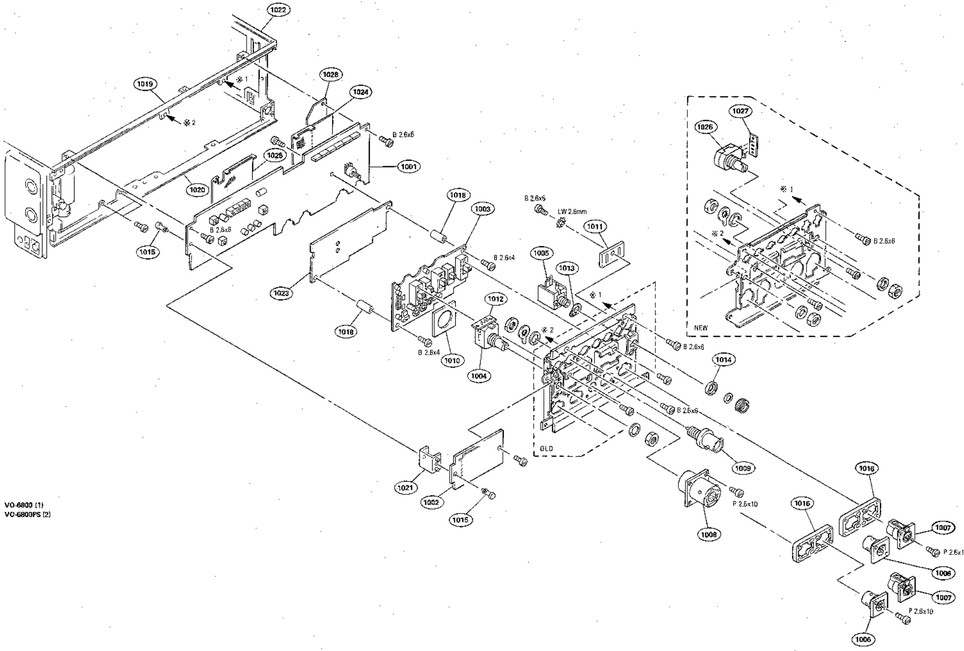
901

No.	Parts No.	SP	Description
901	A-6751-200-A	s	CASSETTE COMPARTMENT ASSY
902	X-3657-049-0	o	RETAINER ASSY, C REEL
903	X-3685-826-1	o	HOLDER (L) ASSY, C (UP TO S/N 10120)
	X-3685-826-2	o	HOLDER (L) ASSY, C (S/N 10121 AND HIGHER)
904	X-3685-832-2	o	GEAR ASSY, T
905	X-3685-834-1	o	ARM (LEFT LOWER) ASSY, C
906	X-3685-835-1	o	ARM (RIGHT LOWER) ASSY, C
907	X-3685-836-1	o	ARM (LEFT UPPER) ASSY, C
908	X-3685-837-1	o	ARM (RIGHT UPPER) ASSY, C
909	3-657-119-01	o	PLATE, RELEASE, (C) LID LOCK
910	3-657-120-04	o	ROLLER
911	3-657-195-00	s	SLEEVE, C
912	3-657-238-00	o	SPRING, TENSION
913	3-681-528-00	o	DAMPER
914	3-685-945-01	o	HOOK, SPRING, C
915	3-685-946-01	s	PIN, LOCK, LEVER, E
916	3-685-947-01	o	STAY (FRONT), C
917	3-685-948-01	o	STAY (REAR), C
918	3-685-949-04	o	RETAINER, SPRING
919	3-701-441-21	s	WASHER, POLY 4MM DIA., 0.5T
920	3-701-444-11	s	WASHER, POLY 6MM DIA., 0.25T
921	3-701-444-21	s	WASHER, POLY 6MM DIA., 0.5T
922	3-657-122-01	o	CUSHION

Connector Panel and Audio Board Blocks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1012
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NEW
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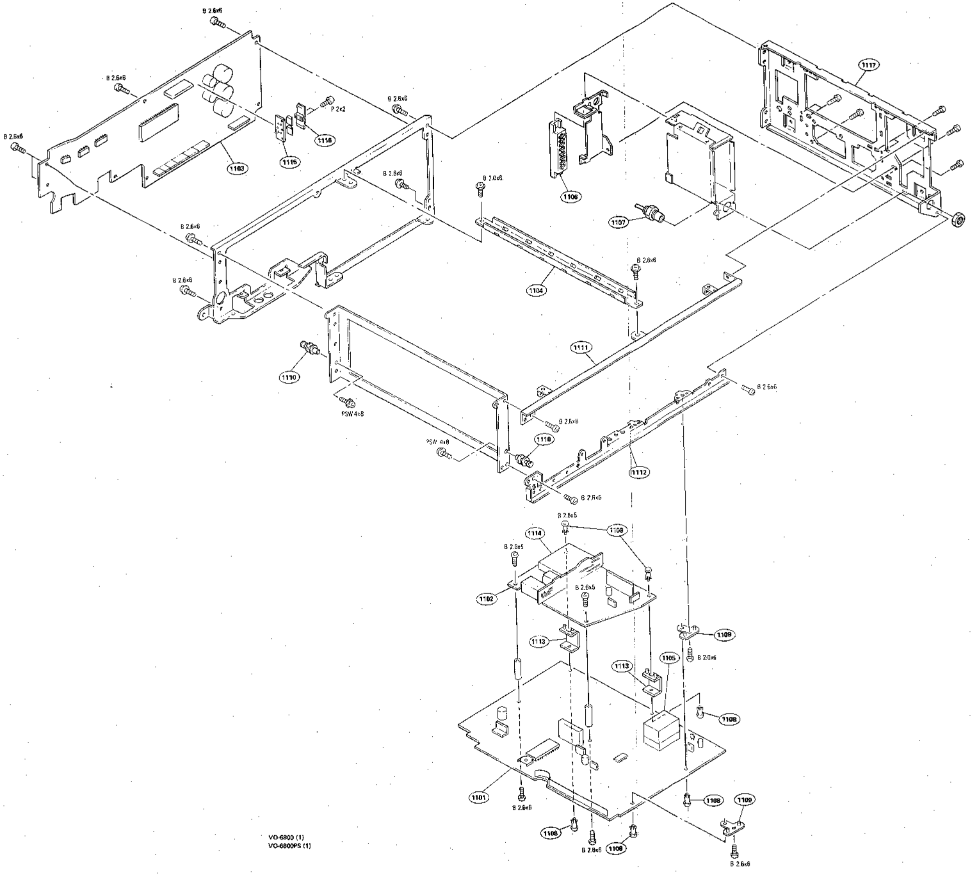
P 2.6x10
1006
1007
P 2.6x10
1006

VO-6800 (1)
VO-6800PS (2)

No.	Parts No.	SP	Description
1001	A-6713-208-A	o	MOUNTED CIRCUIT BOARD, AU-49 (UC: UP TO S/N 11580) (PS: UP TO S/N 11620)
	A-6713-208-B	o	MOUNTED CIRCUIT BOARD, AU-49 (UC: S/N 11581 AND HIGHER (PS: S/N 11621 AND HIGHER
1002	A-6713-209-A	o	MOUNTED CI RCUIT BOARD, AU-51 (UC: UP TO S/N 13480) (PS: UP TO S/N 12170)
	A-6713-209-B	o	MOUNTED CI RCUIT BOARD, AU-51 (UC: S/N 13481 AND HIGHER) (PS: S/N 12171 AND HIGHER)
1003	A-6713-210-A	o	MOUNTED CIRCUIT BOARD, CM-19
1004	1-230-553-11	s	RES, VAR, CARBON 100K
1005	1-507-251-XX	s	JACK
1006	1-509-176-31	s	RECEPTACLE, 3P
1007	1-509-184-31	s	RECEPTACLE
1008	1-561-040-00	s	CONNECTOR, 14P (F)
1009	1-561-781-21	s	RECEPTACLE, BNC
1010	1-611-958-11	o	PRINTED CIRCUIT BOARD, DU-79
1011	1-611-959-11	o	PRINTED CIRCUIT BOARD, SW-61
1012	1-611-965-11	o	PRINTED CIRCUIT BOARD, DUS-6
1013	3-437-228-00	s	INSULATOR, JACK
1014	3-437-229-01	s	INSULATOR (B), JACK
1015	3-646-090-00	s	RIVET, NYLON
1016	3-682-919-00	o	SPACER (R), XLR
1018	3-686-021-01	o	SPACER, AU PC BOARD (UC: UP TO S/N 11580) (PS: UP TO S/N 11620)
	3-686-021-02	o	SPACER, AU PC BOARD (UC: S/N 11581 AND HIGHER) (PS: S/N 11621 AND HIGHER)
1019	3-686-034-01	o	FRAME (UPPER), R
1020	3-686-035-01	o	FRAME (LOWER), R
1021	3-686-040-01	s	HINGE
1022	3-686-061-01	o	FRAME, REAR
1023	3-687-924-01	o	SHEET, INSULATING, CM
1024	X-3685-862-1	o	COVER (B)ASSY, PROTECTION, AU (UC: S/N 10331 TO 15330) (PS: S/N 10121 TO 14520)
1025	X-3685-863-1	o	COVER (A)ASSY, PROTECTION, AU (UC: S/N 10331 TO 15330) (PS: S/N 10121 TO 14520)
1026	1-230-858-11	s	RES, VAR, CARBON 10K (UC: S/N 11581 AND HIGHER) (PS: S/N 11621 AND HIGHER)
1027	1-615-689-11	o	PRINTED CIRCUIT BOARD, DUS-69 (UC: S/N 11581 AND HIGHER) (PS: S/N 11621 AND HIGHER)
1028	3-696-907-01	o	SHEET, INSULATING, L-MOTOR (UC: S/N 15331 AND HIGHER) (PS: S/N 14521 AND HIGHER)

Printed Circuit Board and Frame Blocks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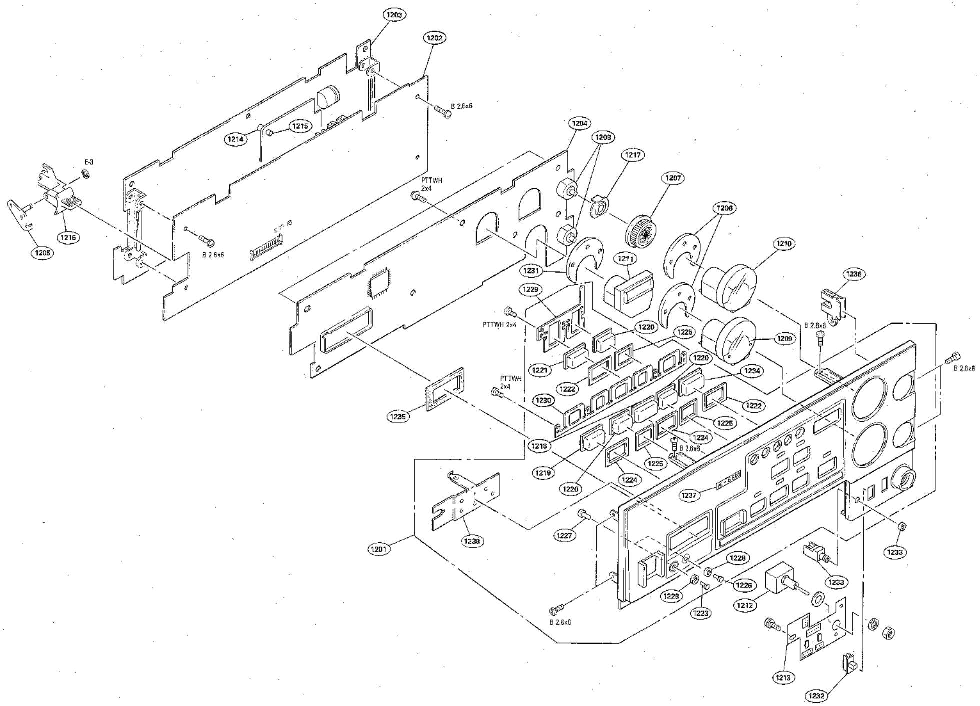
1108
B 2.6x6
1108
B 2.6x6

VO-6800 (1)
VO-6800PS (1)

No.	Parts No.	SP	Description
1101	A-6711-543-A	o	MOUNTED CIRCUIT BOARD, VO-11
1102	A-6711-545-A	o	MOUNTED CIRCUIT BOARD, YC-24
1103	A-6715-230-A	o	MOUNTED CIRCUIT BOARD, SV-57
1104	A-6730-725-A	s	BEAM ASSY, UPPER
1105	X-3685-847-1	o	PLATE (LOWER) ASSY, SHIELD, VO
1106	1-507-403-00	o	CONNECTOR PCB
1107	1-555-334-00	s	DIN CONNECTOR ASSY
1108	3-646-090-00	s	RIVET, NYLON
1109	3-657-153-00	o	HINGE
1110	3-685-891-02	o	SUSPENSION
1111	3-686-034-01	o	FRAME (UPPER), R
1112	3-686-035-01	o	FRAME (LOWER), R
1113	3-686-040-01	s	HINGE
1114	3-686-054-02	o	STUD, SUPPORT, PC BOARD
1115	3-686-055-01	o	HEAT SINK
1116	3-686-056-01	o	SPRING, LEAF
1117	3-686-061-01	o	FRAME, REAR

Front Panel and Function Key Blocks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SY-18
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PTTWH 2x4
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1223
B 2.6x6
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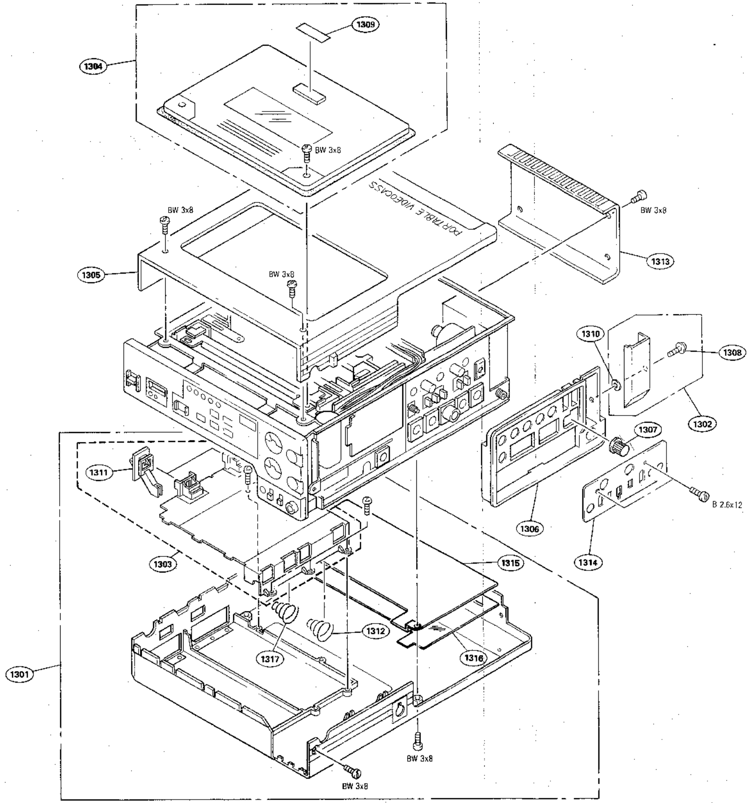
1232

No.	Parts No.	SP	Description
1201	A-6704-160-A	o	PANEL SUB ASSY, FRONT
1202	A-6717-362-A	o	MOUNTED CIRCUIT BOARD, SY-18
1203	A-6717-364-A	o	MOUNTED CIRCUIT BOARD, SY-22
1204	A-6717-365-A	o	MOUNTED CIRCUIT BOARD, KY-53
1205	X-3685-825-1	o	HOLDER ASSY, E LEVER
1206	X-3685-853-1	o	CUSHION ASSY, METER
1207	X-3685-854-1	s	KNOB ASSY, CONTROL
1208	1-230-541-11	s	RES, VAR, CARBON 10K
1209	1-520-476-11	s	METER, LEVEL
1210	1-520-476-21	s	METER, LEVEL
1211	1-520-477-11	s	METER, BATTERY
1212	1-553-246-00	s	SWITCH, TOGGLE
1213	1-611-955-11	o	PRINTED CIRCUIT BOARD, SW-29
1214	3-659-487-00	s	HOLDER, BUZZER
1215	3-659-488-00	s	PIN, BUZZER HOLDER
1216	3-685-976-01	s	BUTTON, E
1217	3-686-067-01	s	HOLDER, CONTROL
1218	3-686-076-01	s	KEY TOP (B)
1219	3-686-076-11	s	KEY TOP (B)
1220	3-686-077-01	s	KEY TOP (A)
1221	3-686-079-01	s	KEY TOP (C)
1222	3-686-080-01	o	SPACER (C)
1223	3-686-081-01	s	PUSH BUTTON (2)
1224	3-686-082-01	o	SPACER (B)
1225	3-686-083-01	o	SPACER (A)
1226	3-686-084-01	s	PUSH BUTTON
1227	3-686-085-01	s	PIN, PUSH BUTTON
1228	3-686-086-01	s	CUSHION, BUTTON
1229	3-686-087-01	o	SPRING (A)
1230	3-686-089-01	o	SPRING (B)
1231	3-686-092-01	o	CUSHION, METER
1232	3-686-093-03	s	LEVER (B), SW
1233	1-507-195-21	s	SPECIAL REMOTE CONTROL JACK
1234	3-686-079-11	s	KEY TOP (C)
1235	3-687-929-01	o	COVER, DUST, COUNTER
1236	3-687-930-01	o	PLATE, GROUND, RJ
1237	3-687-931-01	o	LABEL, F PANEL
1238	3-687-934-01	o	PLATE, GROUND F PANEL

Ornamental Panel Block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1301
BW 3x8
BW 3x8

VO-6800 (2)
VO-6800PS (2)

No.	Parts No.	SP	Description
1301	A-6703-469-A	o	CABINET (LOWER) ASSY (UP TO S/N 10330)
	A-6703-469-F	o	CABINET (LOWER) ASSY (S/N 10331 AND HIGHER)
1302	A-6703-470-A	o	LID ASSY, RF
1303	A-6703-500-F	s	HOLDER ASSY, BATTERY
1304	X-3685-843-3	s	COVER ASSY, C
1305	X-3685-849-1	o	CABINET (UPPER) ASSY (UP TO S/N 10330)
	X-3685-849-5	o	CABINET (UPPER) ASSY (S/N 10331 AND HIGHER)
1306	X-3685-850-1	o	ESCUTCHEON ASSY, CP (UP TO S/N 11580)
	X-3685-850-3	o	ESCUTCHEON ASSY, CP (S/N 11581 AND HIGHER)
1307	X-3685-857-1	s	KNOB ASSY, CP
1308	2-382-129-11	s	SCREW (M3x8), BW
1309	3-645-317-00	o	EMBLEM, S U-MATIC
1310	3-669-596-00	s	WASHER (2.3), STOPPER
1311	3-686-028-04	s	BUTTON, SLIDE
1312	3-686-031-02	o	SPRING, COMPRESSION
1313	3-686-036-01	o	PANEL, REAR
1314	3-686-075-03	o	PLATE (N), ORNAMENTAL, CP
1315	3-687-960-01	o	PLATE, SHIELD, BOTTOM (S/N 10331 AND HIGHER)
1316	3-687-961-01	o	SHEET, INSULATING (S/N 10331 AND HIGHER)
1317	3-687-977-01	s	SPRING, (A) COMPRESSION (S/N 11031 AND HIGHER)

15-3. ELECTRICAL PARTS LIST

ABBREVIATIONS

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
C□□, CV□□	CAPACITOR	IC□□	IC	Q□□	TRANSISTOR
CF□□	CERAMIC FILTER	J□□	JACK	R□□, RV□□	RESISTOR
CN□□	CONNECTOR	L□□	INDUCTOR	RY□□	RELAY
D□□	DIODE	M□□	MOTOR	S□□, SW□□	SWITCH
DL□□	DELAY LINE	ME□□	METER	SB□□	SOLAR BATTERY
F□□	FUSE	MIC□□	MICROPHONE	T□□	TRANSFORMER
FB□□	FERRITE BEAD	PG□□	PG COIL	TH□□	THERMISTOR
FL□□	FILTER	PL□□	LAMP	X□□	CRYSTAL
H□□	HEAD	PM□□	SOLENOID		

All capacitors are in micro farads unless otherwise specified.

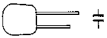
All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

Parts that are not listed in the "reference numbers order list" are shown in following table.
Reference numbers are omitted.

CAPACITOR

SILVERED MICA CAPACITOR **1 pF through 620 pF**
±5%, 50WV

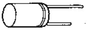


Parts No. 1-107-□□□-00

Value	Parts No. –□□□–	Value	Parts No. –□□□–	Value	Parts No. –□□□–	Value	Parts No. –□□□–
1 pF	098	15 pF	065	51 pF	078	180 pF	091
2	099	16	066	56	079	200	092
3	100	18	067	62	080	220	093
4	101	20	068	68	081	240	094
5	102	22	069	75	082	270	095
6	103	24	070	82	083	300	096
7	104	27	071	91	084	330	097
8	105	30	072	100	085	360	231
9	106	33	073	110	086	390	232
10	061	36	074	120	087	430	233
11	062	39	075	130	088	470	234
12	063	43	076	150	089	510	235
13	064	47	077	160	090	560	236
						620	237

ELECTROLYTIC CAPACITOR

0.1μF through 100μF ±20%
4WV through 50WV



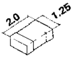
Parts No. 1-124-□□□-00

Value		Part No. −□□□−
0.1μF	50V	249
0.15	50	250
0.22	50	251
0.33	50	252
0.47	50	253
0.68	50	254
1	50	255
1.5	50	256
2.2	35	
	50	257
3.3	25	
	35	
	50	258
4.7	16	245

Value		Part No. −□□□−
4.7μF	25V	
	35	245
	50	259
6.8	10	
	16	
	25	239
	35	246
	50	260
10	6.3	
	10	
	16	233
	25	240
	35	247
	50	261

Value		Part No. −□□□−
22μF	6.3V	222
	10	
	16	234
	25	
	35	248
33	4	220
	6.3	
	10	229
	16	
	25	242
47	6.3	224
	10	
	16	236
100	6.3	225

CHIP CERAMIC CAPACITOR



220pF through 0.018μF(B) ± 10% 50WV

0.022μF through 0.068μF(F) $^{+80}_{-20}$ % 50WV

0.1μF(F) $^{+80}_{-20}$ % 25WV

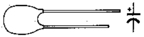
Parts No. 1-163-□□□-00

Value	Parts No. − □□□ −
100pF	—
120	—
150	—
180	—
220	001
270	002
330	003
390	004
470	005
560	006
680	007
820	008

Value	Parts No. − □□□ −
0.001μF	009
0.0012	010
0.0015	011
0.0018	012
0.0022	013
0.0027	014
0.0033	015
0.0039	016
0.0047	017
0.0056	018
0.0068	019
0.0082	020

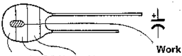
Value	Parts No. − □□□ −
0.01μF	021
0.012	022
0.015	023
0.018	024
0.022	033
0.027	—
0.033	034
0.039	—
0.047	035
0.056	—
0.068	036
0.082	—
0.1	038

TANTALUM CAPACITOR



0.01μF through 100μF ± 10%
3.15V through 35V

NOTE: The value of the parts that are marked by * in the below table are indicated by color code. (to the value with ± 20%)



Ex. BRN GRN BLU
1 5 6
15 x 10^6 pF = 15μF

BLK	RED	YEL	GRN	BLU	GRY	WHT
10V	35	6.3	16	20	25	3.15

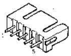
Parts No. 1-131-□□□-00

Value		Parts No. —□□□—
0.01μ	35V	*396
0.015	35	*397
0.022	35	*398
0.033	35	*399
0.047	35	*400
0.068	35	*401
0.1	35	341
0.15	35	342
0.22	35	343
0.33	25	*409
	35	344
0.47	20	*412
	35	345
0.68	16	*415
	25	*410
	35	346
1.0	10	*418
	25	498
1.0μ	35V	347
1.5	6.3	*421
	20	499
	25	354
	35	348
2.2	3.15	*424
	16	500
	20	361
	25	355
	35	349
3.3	10	501
	16	368
	20	362
	25	356
	35	350
4.7	6.3	502
	10	375
	16	369
4.7μ	20V	363
	25	357
	35	351
6.8	3.15	503
	6.3	382
	10	376
	16	370
	20	364
	25	358
	35	352
10	3.15	389
	6.3	383
	10	377
	16	371
	20	365
	25	359
	35	353
15	3.15	390
	6.3	384
15μ	10V	378
	16	372
	20	366
	25	360
22	3.15	391
	6.3	385
	10	379
	16	373
	20	367
33	3.15	392
	6.3	386
	10	380
	16	374
47	3.15	393
	6.3	387
	10	381
68	3.15	394
	6.3	388
100	3.15	395

CONNECTOR

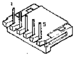
plug

top-type receptacle



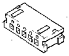
2P	1-564-001-11
3P	002-00
4P	003-00
5P	004-00
6P	005-00
7P	006-11
8P	007-00
9P	008-00
10P	009-00
11P	010-11
12P	011-11
13P	
14P	069-00
15P	

side-type receptacle



2P	1-564-012-00
3P	013-00
4P	014-00
5P	015-00
6P	016-00
7P	017-00
8P	018-11
9P	019-11
10P	020-00
11P	021-11
12P	022-00
13P	
14P	
15P	

housing



2P	1-562-147-11
3P	148-11
4P	149-11
5P	150-11
6P	151-11
7P	152-11
8P	153-11
9P	154-11
10P	155-11
11P	156-11
12P	157-11
13P	
14P	185-00
15P	

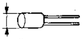
contact

1-564-026-21

INDUCTOR

MICRO INDUCTOR

1 μH through 470 μH
±5%



Parts No. 1-407-□□□-XX

Value	Parts No. —□□□—
1 μH	178
1.2	179
1.5	180
1.8	181
2.2	182
2.7	183
3.3	184
3.9	185

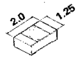
Value	Parts No. —□□□—
4.7 μH	186
5.6	187
6.8	188
8.2	189
10	157
12	158
15	159
18	160

Value	Parts No. —□□□—
22 μH	161
27	162
33	163
39	164
47	165
56	166
68	167
82	168

Value	Parts No. —□□□—
100 μH	169
120	170
150	171
180	172
220	173
270	174
330	175
390	176
470	177

RESISTOR

CHIP RESISTOR



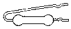
±5% 1/10W
0Ω through 3.3MΩ

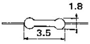
Parts No. 1-216-□□□-00

Value	Parts No. – □□□ –	Value	Parts No. – □□□ –	Value	Parts No. – □□□ –	Value	Parts No. – □□□ –	Value	Parts No. – □□□ –
0Ω	295	30	012	910	048	30	084	910	120
1Ω	—	33Ω	013	1kΩ	049	33kΩ	085	1MΩ	121
1.1	—	36	014	1.1	050	36	086	1.1	122
1.2	—	39	015	1.2	051	39	087	1.2	123
1.3	—	43	016	1.3	052	43	088	1.3	124
1.5	—	47	017	1.5	053	47	089	1.5	125
1.6	—	51	018	1.6	054	51	090	1.6	126
1.8	—	56	019	1.8	055	56	091	1.8	127
2	—	62	020	2	056	62	092	2	128
2.2	298	68	021	2.2	057	68	093	2.2	129
2.4	301	75	022	2.4	058	75	094	2.4	130
2.7	302	82	023	2.7	059	82	095	2.7	131
3	303	91	024	3	060	91	096	3	132
3.3	304	100Ω	025	3.3	061	100kΩ	097	3.3	133
3.6	305	110	026	3.6	062	110	098		
3.9	306	120	027	3.9	063	120	099		
4.3	307	130	028	4.3	064	130	100		
4.7	308	150	029	4.7	065	150	101		
5.1	297	160	030	5.1	066	160	102		
5.6	309	180	031	5.6	067	180	103		
6.2	310	200	032	6.2	068	200	104		
6.8	311	220	033	6.8	069	220	105		
7.5	312	240	034	7.5	070	240kΩ	106		
8.2	313	270	035	8.2	071	270	107		
9.1	314	300	036	9.1	072	300	108		
10Ω	001	330	037	10kΩ	073	330	109		
11	002	360	038	11	074	360	110		
12	003	390	039	12	075	390	111		
13	004	430	040	13	076	430	112		
15	005	470	041	15	077	470	113		
16	006	510	042	16	078	510	114		
18	007	560	043	18	079	560	115		
20	008	620	044	20	080	620	116		
22	009	680	045	22	081	680	117		
24	010	750	046	24	082	750	118		
27	011	820	047	27	083	820	119		

CARBON RESISTOR (1/6W)

±5%, 1/6W, non-special type
2.2Ω through 1MΩ





Parts No. 1-247-□□□-00

Value	Parts No. —□□□—	Value	Parts No. —□□□—	Value	Parts No. —□□□—	Value	Parts No. —□□□—
1Ω	–	36Ω	796	1.2kΩ	833	43kΩ	870
1.1	–	39	797	1.3	834	47	871
1.2	–	43	798	1.5	835	51	872
1.3	–	47	799	1.6	836	56	873
1.5	–	51	800	1.8	837	62	874
1.6	–	56	801	2	838	68	875
1.8	–	62	802	2.2	839	75	876
2	–	68	803	2.4	840	82	877
2.2	767	75	804	2.7	841	91	878
2.4	768	82	805	3	842	100kΩ	879
2.7	769	91	806	3.3	843	110	880
3	770	100Ω	807	3.6	844	120	881
3.3	771	110	808	3.9	845	130	882
3.6	772	120	809	4.3	846	150	883
3.9	773	130	810	4.7	847	160	884
4.3	774	150	811	5.1	848	180	885
4.7	775	160	812	5.6	849	200	886
5.1	776	180	813	6.2	850	220	887
5.6	777	200	814	6.8	851	240	888
6.2	778	220	815	7.5	852	270	889
6.8	779	240	816	8.2	853	300	890
7.5	780	270	817	9.1	854	330	891
8.2	781	300	818	10kΩ	855	360	892
9.1	782	330	819	11	856	390	893
10Ω	783	360	820	12	857	430	894
11	784	390	821	13	858	470	895
12	785	430	822	15	859	510	896
13	786	470	823	16	860	560	897
15	787	510	824	18	861	620	898
16	788	560	825	20	862	680	899
18	789	620	826	22	863	750	900
20	790	680	827	24	864	820	901
22	791	750	828	27	865	910	902
24	792	820	829	30	866	1MΩ	903
27	793	910	830	33	867		
30	794	1kΩ	831	36	868		
33	795	1.1	832	39	869		

Ref.No.	Parts No.	SP	Description
AU-49 BOARD			
	A-6713-208-A	o	MOUNTED CIRCUIT BOARD,AU-49
	S/N UP TO 13480		
C101	1-109-683-11	s	MICA 270PF 1% 500V
C102	1-123-332-00	s	ELECT 47 20% 25V
C103	1-163-259-00	s	CERAMIC CHIP 220PF 5% 50V
C105	1-130-487-00	s	MYLAR 0.022 5% 50V
C109	1-124-462-00	s	ELECT 10 20% 16V
C117	1-124-462-00	s	ELECT 10 20% 16V
C118	1-130-491-00	s	MYLAR 0.047 5% 50V
C120	1-102-115-00	s	CERAMIC 560PF 10% 50V
C125	1-123-321-00	s	ELECT 220 20% 16V
C128	1-163-133-00	s	CERAMIC CHIP 470PF 5% 50V
C129	1-123-321-00	s	ELECT 220 20% 16V
C130	1-124-462-00	s	ELECT 10 20% 16V
C135	1-102-978-00	s	CERAMIC 220PF 5% 50V
C201	1-109-683-00	s	MICA 270PF 1% 500V
C202	1-123-332-00	s	ELECT 47 20% 16V
C203	1-163-125-00	s	CERAMIC CHIP 220PF 5% 50V
C204	1-130-487-00	s	MYLAR 0.022 5% 50V
C205	1-130-487-00	s	MYLAR 0.022 5% 50V
C209	1-124-462-00	s	ELECT 10 20% 16V
C215	1-124-462-00	s	ELECT 10 20% 16V
C217	1-124-462-00	s	ELECT 10 20% 16V
C218	1-130-491-00	s	MYLAR 0.047 5% 50V
C220	1-102-115-00	s	CERAMIC 560PF 10% 50V
C224	1-124-462-00	s	ELECT 10 20% 16V
C225	1-123-321-00	s	ELECT 220 20% 16V
C228	1-163-129-00	s	CERAMIC CHIP 30PF 5% 50V
C229	1-123-321-00	s	ELECT 220 20% 16V
C230	1-124-462-00	s	ELECT 10 20% 16V
C235	1-102-978-00	s	CERAMIC 220PF 5% 50V
C240	1-161-059-00	s	CERAMIC 0.047 10% 50V
C301	1-124-445-00	s	ELECT 100 20% 16V
C304	1-124-462-00	s	ELECT 10 20% 16V
C308	1-124-438-00	s	ELECT 1 20% 50V
C311	1-124-462-00	s	ELECT 10 20% 16V
C313	1-124-462-00	s	ELECT 10 20% 16V
C315	1-124-438-00	s	ELECT 1 20% 50V
C316	1-124-445-00	s	ELECT 100 20% 16V
C322	1-124-468-11	s	ELECT 100 20% 6.3V
CN401	1-564-682-11	o	RECEPTACLE,6P
D101	8-719-100-05	s	1S2837
D102	8-719-101-23	s	1SS123
D103	8-719-101-23	s	1SS123
D104	8-719-100-05	s	1S2837
D105	8-719-101-23	s	1SS123
D201	8-719-100-05	s	1S2837
D202	8-719-101-23	s	1SS123
D203	8-719-101-23	s	1SS123
D301	8-719-191-07	s	RD9.1E
D302	8-719-151-07	s	RD5.1E-B
D303	8-719-101-23	s	1SS123
D304	8-719-911-19	s	1SS119
D306	8-719-911-19	s	1SS119
D307	8-719-911-19	s	1SS119
D308	8-719-101-23	s	1SS123
D309	8-719-911-19	s	1SS119
D310	8-719-911-19	s	1SS119
D311	8-719-151-07	s	RD5.1E-B
D312	8-719-911-19	s	1SS119
D321	8-719-911-19	s	1SS119
D322	8-719-911-19	s	1SS119
D323	8-719-911-19	s	1SS119
FL1	8-749-925-15	s	AFL25F15000G1(MURATA)
FL2	8-749-925-15	s	AFL25F15000G1(MURATA)
IC101	8-759-700-09	s	NJM2043M-D(JRC)
IC102	8-759-200-81	s	TC4053BF(TOSHIBA)
IC103	8-759-700-84	s	NJM2041M-D(JRC)
IC104	8-759-700-84	s	NJM2041M-D(JRC)
IC105	8-759-745-64	s	NJM4560M(JRC)
IC202	8-759-200-81	s	TC4053BF(TOSHIBA)
IC203	8-759-700-84	s	NJM2041M-D(JRC)
IC204	8-759-700-84	s	NJM2041M-D(JRC)
IC205	8-759-745-64	s	NJM4560M(JRC)
IC301	8-759-745-64	s	NJM4560M(JRC)
LV101	1-459-411-00	s	VAR,18mH
LV102	1-459-434-00	s	VAR,22mH
LV103	1-459-411-00	s	VAR,18mH
LV201	1-459-411-00	s	VAR,18mH
LV202	1-459-434-00	s	VAR,22mH
LV203	1-459-411-00	s	VAR,18mH
LV204	1-459-434-00	s	VAR,22mH
Q101	8-729-178-55	s	2SC2785
Q102	8-729-178-55	s	2SC2785
Q103	8-729-100-66	s	2SC1623
Q104	8-729-100-66	s	2SC1623
Q105	8-729-901-01	s	DTC144EK
Q106	8-729-100-66	s	2SC1623
Q107	8-729-901-01	s	DTC144EK
Q108	8-729-100-66	s	2SC1623
Q110	8-729-178-54	s	2SC2785
Q111	8-729-178-54	s	2SC2785
Q112	8-729-100-66	s	2SC1623
Q114	8-729-100-66	s	2SC1623
Q118	8-729-178-54	s	2SC2785
Q119	8-729-117-54	s	2SA1175
Q120	8-729-100-66	s	2SC1623
Q121	8-729-178-54	s	2SC2785
Q122	8-729-117-54	s	2SA1175
Q123	8-729-100-66	s	2SC1623
Q201	8-729-178-55	s	2SC2785
Q202	8-729-178-55	s	2SC2785

Ref.No.	Parts No.	SP	Description
Q203	8-729-100-66	s	2SC1623
Q204	8-729-100-66	s	2SC1623
Q205	8-729-901-01	s	DTC144EK
Q206	8-729-100-66	s	2SC1623
Q207	8-729-901-01	s	DTC144EK
Q208	8-729-100-66	s	2SC1623
Q210	8-729-178-54	s	2SC2785
Q211	8-729-178-54	s	2SC2785
Q212	8-729-100-66	s	2SC1623
Q214	8-729-100-66	s	2SC1623
Q218	8-729-178-54	s	2SC2785
Q219	8-729-117-54	s	2SA1175
Q220	8-729-100-66	s	2SC1623
Q221	8-729-178-54	s	2SC2785
Q222	8-729-117-54	s	2SA1175
Q223	8-729-100-66	s	2SC1623
Q230	8-729-901-06	s	DTA144EK
Q301	8-729-901-01	s	DTC144EK
Q302	8-729-378-84	s	2SD788
Q303	8-729-100-66	s	2SC1623
Q304	8-729-100-76	s	2SA812
Q305	8-729-100-66	s	2SC1623
Q306	8-729-178-54	s	2SC2785
Q307	8-729-100-66	s	2SC1623
Q308	8-729-100-66	s	2SC1623
Q309	8-729-901-01	s	DTC144EK
Q310	8-729-901-01	s	DTC144EK
Q311	8-729-100-76	s	2SA812
Q312	8-729-100-76	s	2SA812
Q313	8-729-100-66	s	2SC1623
Q314	8-729-100-76	s	2SA812
Q315	8-729-100-76	s	2SA812
Q316	8-729-373-92	s	2SB739
Q317	8-729-378-84	s	2SD788
Q318	8-729-901-01	s	DTC144EK
Q325	8-729-901-01	s	DTC144EK
Q326	8-729-901-01	s	DTC144EK
Q327	8-729-901-01	s	DTC144EK
Q328	8-729-900-89	s	DTC144ES
Q340	8-729-901-01	s	DTC144EK
Q341	8-729-901-01	s	DTC144EK
R112	1-215-475-00	s	METAL 180k 1% 1/6W
R155	1-215-433-00	s	METAL 3.3k 1% 1/6W
R156	1-215-433-00	s	METAL 3.3k 1% 1/6W
R161	1-215-445-00	s	METAL 10k 1% 1/6W
R165	1-215-389-00	s	METAL 47 1% 1/6W
R167	1-215-445-00	s	METAL 10k 1% 1/6W
R170	1-215-433-00	s	METAL 3.3k 1% 1/6W
R171	1-215-433-00	s	METAL 3.3k 1% 1/6W
R173	1-215-445-00	s	METAL 10k 1% 1/6W
R176	1-215-445-00	s	METAL 10k 1% 1/6W
R180	1-215-389-00	s	METAL 47 1% 1/6W
R182	1-215-445-00	s	METAL 10k 1% 1/6W
R212	1-215-475-00	s	METAL 180k 1% 1/6W
R255	1-215-433-00	s	METAL 3.3k 1% 1/6W
R256	1-215-433-00	s	METAL 3.3k 1% 1/6W
R261	1-215-445-00	s	METAL 10k 1% 1/6W
R265	1-215-389-00	s	METAL 47 1% 1/6W
R267	1-215-445-00	s	METAL 10k 1% 1/6W
R270	1-215-433-00	s	METAL 3.3k 1% 1/6W
R271	1-215-433-00	s	METAL 3.3k 1% 1/6W
R273	1-215-445-00	s	METAL 10k 1% 1/6W
R276	1-215-445-00	s	METAL 10k 1% 1/6W
R280	1-215-389-00	s	METAL 47 1% 1/6W
R282	1-215-445-00	s	METAL 10k 1% 1/6W
RV102	1-228-890-00	s	VAR,METAL 4.7k
RV103	1-228-891-00	s	VAR,METAL 10k
RV104	1-228-890-00	s	VAR,METAL 4.7k
RV105	1-228-461-00	s	VAR,CERMET 50k
RV106	1-228-890-00	s	VAR,METAL 4.7k
RV107	1-228-890-00	s	VAR,METAL 4.7k
RV108	1-228-889-00	s	VAR,METAL 2.2k
RV201	1-228-894-00	s	VAR,METAL 47k
RV202	1-228-890-00	s	VAR,METAL 4.7k
RV203	1-228-891-00	s	VAR,METAL 10k
RV204	1-228-890-00	s	VAR,METAL 4.7k
RV205	1-228-461-00	s	VAR,CERMET 50k
RV206	1-228-890-00	s	VAR,METAL 4.7k
RV207	1-228-890-00	s	VAR,METAL 4.7k
RV208	1-228-889-00	s	VAR,METAL 2.2k
RV301	1-230-542-11	s	VAR,CARBON 10k
RV302	1-228-473-00	s	VAR,CERMET 5k
RV303	1-228-473-00	s	VAR,CERMET 5k

AU-49 BOARD

	A-6713-208-B	o	MOUNTED CIRCUIT BOARD,AU-49

S/N 13481 AND LATER

C103	1-163-259-00	s	CERAMIC CHIP 220PF 5% 50V
C105	1-130-487-00	s	MYLAR 0.022 5% 50V
C109	1-124-462-00	s	ELECT 10 20% 16V
C117	1-124-462-00	s	ELECT 10 20% 16V
C118	1-130-491-00	s	MYLAR 0.047 10% 35V
C120	1-102-116-21	s	CERAMIC 680PF 10% 50V
C128	1-163-133-00	s	CERAMIC CHIP 470PF 5% 50V
C135	1-163-259-00	s	CERAMIC CHIP 220PF 5% 50V
C160	1-163-101-00	s	CERAMIC CHIP 22PF 5% 50V
C161	1-163-101-00	s	CERAMIC CHIP 22PF 5% 50V
C203	1-163-259-00	s	CERAMIC CHIP 220PF 5% 50V
C204	1-130-476-00	s	MYLAR 0.0027 5% 50V
C205	1-130-487-00	s	MYLAR 0.022 5% 50V
C209	1-124-462-00	s	ELECT 10 20% 16V
C215	1-124-462-00	s	ELECT 10 20% 16V
C217	1-124-462-00	s	ELECT 10 20% 16V
C218	1-130-491-00	s	MYLAR 0.047 10% 35V
C220	1-102-116-21	s	CERAMIC 680PF 10% 50V
C224	1-124-462-00	s	ELECT 10 20% 16V
C228	1-163-129-00	s	CERAMIC CHIP 330PF 5% 50V
C235	1-163-259-00	s	CERAMIC CHIP 220PF 5% 50V
C240	1-130-476-00	s	MYLAR 0.0027 5% 50V
C260	1-163-101-00	s	CERAMIC CHIP 22PF 5% 50V
C261	1-163-101-00	s	CERAMIC CHIP 22PF 5% 50V
C301	1-124-445-00	s	ELECT 100 20% 16V
C304	1-124-462-00	s	ELECT 10 20% 16V
C308	1-124-438-00	s	ELECT 1 20% 50V
C311	1-124-462-00	s	ELECT 10 20% 16V
C313	1-124-462-00	s	ELECT 10 20% 16V
C315	1-124-438-00	s	ELECT 1 20% 50V
C316	1-124-445-00	s	ELECT 100 20% 16V
C322	1-124-468-11	s	ELECT 100 20% 6.3V
C335	1-130-472-00	s	MYLAR 0.0012 5% 50V

Ref.No.	Parts No.	SP	Description
D1	8-719-911-19	s	1SS119 (S/N UP TO 15330)
D101	8-719-100-05	s	1S2837
D104	8-719-100-05	s	1S2837
D105	8-719-101-23	s	1SS123
D201	8-719-100-05	s	1S2837
D301	8-719-100-50	s	RD9.1E
D302	8-719-151-07	s	RD5.1E-B
D303	8-719-101-23	s	1SS123
D304	8-719-911-19	s	1SS119
D306	8-719-911-19	s	1SS119 (S/N UP TO 15330)
D307	8-719-911-19	s	1SS119 (S/N UP TO 15330)
D308	8-719-100-05	s	1S2837
D309	8-719-911-19	s	1SS119
D310	8-719-911-19	s	1SS119
D311	8-719-151-07	s	RD5.1E-B
D312	8-719-911-19	s	1SS119
D320	8-719-911-19	s	1SS119
D323	8-719-100-03	s	1S2835
D324	8-719-100-05	s	1S2837 (S/N 15331 AND LATER)
FL1	8-741-134-32	s	BX1343A(SONY)
FL2	8-741-134-32	s	BX1343A(SONY)
IC101	8-759-700-09	s	NJM2043M(JRC)
IC102	8-759-200-81	s	TC4053BF(TOSHIBA)
IC103	8-759-700-84	s	NJM2041M(JRC)
IC104	8-759-700-84	s	NJM2041M(JRC)
IC105	8-759-905-42	s	NE5534P(TI)
IC106	8-759-905-42	s	NE5534P(TI)
IC202	8-759-200-81	s	TC4053BF(TOSHIBA)
IC203	8-759-700-84	s	NJM2041M(JRC)
IC204	8-759-700-84	s	NJM2041M(JRC)
IC205	8-759-905-42	s	NE5534P(TI)
IC206	8-759-905-42	s	NE5534P(TI)
IC301	8-759-745-64	s	NJM4560M(JRC)
LV101	1-459-411-00	s	VAR,18mH
LV102	1-459-434-11	s	VAR,22mH
LV103	1-459-411-00	s	VAR,18mH
LV201	1-459-411-00	s	VAR,18mH
LV202	1-459-434-11	s	VAR,22mH
LV203	1-459-411-00	s	BAR,18mH
LV204	1-459-434-11	s	BAR,22mH
Q101	8-729-178-55	s	2SC2785
Q102	8-729-178-55	s	2SC2785
Q103	8-729-400-76	s	2SD1030
Q104	8-729-100-66	s	2SC1623
Q105	8-729-901-01	s	DTC144EK
Q106	8-729-100-66	s	2SC1623
Q107	8-729-901-01	s	DTC144EK
Q108	8-729-100-66	s	2SC1623
Q110	8-729-178-54	s	2SC2785
Q111	8-729-178-54	s	2SC2785
Q112	8-729-400-76	s	2SD1030
Q114	8-729-400-76	s	2SD1030
Q120	8-729-400-76	s	2SD1030
Q123	8-729-400-76	s	2SD1030
Q133	8-729-400-76	s	2SD1030
Q136	8-729-400-76	s	2SD1030
Q201	8-729-178-55	s	2SC2785
Q202	8-729-178-55	s	2SC2785
Q203	8-729-400-76	s	2SD1030
Q204	8-729-100-66	s	2SC1623

Ref.No.	Parts No.	SP	Description
Q205	8-729-901-01	s	DTC144EK
Q206	8-729-100-66	s	2SC1623
Q207	8-729-901-01	s	DTC144EK
Q208	8-729-100-66	s	2SC1623
Q210	8-729-178-54	s	2SC2785
Q211	8-729-178-54	s	2SC2785
Q212	8-729-400-76	s	2SD1030
Q214	8-729-400-76	s	2SD1030
Q220	8-729-400-76	s	2SD1030
Q223	8-729-400-76	s	2SD1030
Q233	8-729-400-76	s	2SD1030
Q236	8-729-400-76	s	2SD1030
Q301	8-729-901-01	s	DTC144EK
Q302	8-729-905-52	s	2SD1055
Q303	8-729-100-66	s	2SC1623
Q304	8-729-100-76	s	2SA812
Q305	8-729-100-66	s	2SC1623
Q306	8-729-178-54	s	2SC2785
Q307	8-729-100-66	s	2SC1623
Q308	8-729-100-66	s	2SC1623
Q309	8-729-901-01	s	DTC144EK
Q310	8-729-901-01	s	DTC144EK
Q311	8-729-100-76	s	2SA812
Q312	8-729-100-76	s	2SA812
Q313	8-729-100-66	s	2SC1623
Q314	8-729-100-76	s	2SA812
Q315	8-729-100-76	s	2SA812
Q316	8-729-982-22	s	2SB822
Q317	8-729-905-52	s	2SD1055
Q318	8-729-901-01	s	DTC144EK
Q325	8-729-901-01	s	DTC144EK
Q326	8-729-901-01	s	DTC144EK
Q327	8-729-901-01	s	DTC144EK
Q328	8-729-901-01	s	DTC144EK
Q330	8-729-100-66	s	2SC1623
R1	1-249-405-11	s	CARBON 100 5% 1/6W
R112	1-215-475-00	s	METAL 180K 5% 1/6W
R155	1-215-433-00	s	METAL 3.3K 1% 1/6W
R156	1-215-433-00	s	METAL 3.3K 1% 1/6W
R161	1-215-445-00	s	METAL 10K 1% 1/6W
R165	1-215-389-00	s	METAL 47 1% 1/6W
R167	1-215-445-00	s	METAL 10K 1% 1/6W
R170	1-215-433-00	s	METAL 3.3K 1% 1/6W
R171	1-215-433-00	s	METAL 3.3K 1% 1/6W
R173	1-215-445-00	s	METAL 10K 1% 1/6W
R176	1-215-445-00	s	METAL 10K 1% 1/6W
R180	1-215-389-00	s	METAL 47 1% 1/6W
R182	1-215-445-00	s	METAL 10K 1% 1/6W
R212	1-215-475-00	s	METAL 180K 5% 1/6W
R255	1-215-433-00	s	METAL 3.3K 1% 1/6W
R256	1-215-433-00	s	METAL 3.3K 1% 1/6W
R261	1-215-445-00	s	METAL 10K 1% 1/6W
R265	1-215-389-00	s	METAL 47 1% 1/6W
R267	1-215-445-00	s	METAL 10K 1% 1/6W
R270	1-215-433-00	s	METAL 3.3K 1% 1/6W
R271	1-215-433-00	s	METAL 3.3K 1% 1/6W
R273	1-215-445-00	s	METAL 10K 1% 1/6W
R276	1-215-445-00	s	METAL 10K 1% 1/6W
R280	1-215-389-00	s	METAL 47 1% 1/6W
R282	1-215-445-00	s	METAL 10K 1% 1/6W
RV102	1-228-890-00	s	VER,METAL 4.7K
RV103	1-228-891-00	s	VER,METAL 10K
RV104	1-228-890-00	s	VER,METAL 4.7K
RV105	1-228-461-00	s	VER,CERMET 50K
RV106	1-228-890-00	s	VER,METAL 4.7K

Ref.No.	Parts No.	SP	Description
RV107	1-228-890-00	s	VAR,METAL 4.7K
RV108	1-228-889-00	s	VAR,METAL 2.2K
RV201	1-228-891-00	s	VAR,METAL 10K
RV202	1-228-890-00	s	VAR,METAL 4.7K
RV203	1-228-891-00	s	VAR,METAL 10K
RV204	1-228-890-00	s	VAR,METAL 4.7K
RV205	1-228-461-00	s	VAR,CERMET 50K
RV206	1-228-890-00	s	VAR,METAL 4.7K
RV207	1-228-890-00	s	VAR,METAL 4.7K
RV208	1-228-889-00	s	VAR,METAL 2.2K
RV302	1-228-394-00	s	VAR,METAL 4.7K
RV303	1-228-394-00	s	VAR,METAL 4.7K

AU-51 BOARD

Ref.No.	Parts No.	SP	Description
	A-6713-209-A	o	MOUNTED CIRCUIT BOARD,AU-51 WITH DUS-3

S/N UP TO 13480

DUS-3 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-961-11	o	PRINTED CIRCUIT BOARD, DUS-3
LV301	1-407-293-00	s	VAR,1.5mH

AU-51 BOARD

Ref.No.	Parts No.	SP	Description
C301	1-109-677-00	s	MICA 150PF 1% 500V
C302	1-109-677-00	s	MICA 150PF 1% 500V
C309	1-131-349-00	s	TANTALUM 2.2 10% 35V
C310	1-131-349-00	s	TANTALUM 2.2 10% 35V
C311	1-161-055-00	s	CERAMIC 0.022 10% 50V
C312	1-161-055-00	s	CERAMIC 0.022 10% 50V
C317	1-162-541-11	s	CERAMIC CHIP 470PF 5% 100V
C318	1-162-542-11	s	CERAMIC CHIP 680PF 5% 100V
C319	1-162-540-11	s	CERAMIC CHIP 1500PF 5% 100V
CN435	1-564-317-00	o	RECEPTACLE,5P
CP301	1-433-258-00	s	OSCILLATOR BLOCK,BIAS/ERASE

S/N UP TO 11030

Ref.No.	Parts No.	SP	Description
CP301	1-464-372-11	s	OSCILLATOR BLOCK,BIAS/ERASE

S/N 11031 AND LATER

Ref.No.	Parts No.	SP	Description
D8	8-719-100-05	s	1S2837
D9	8-719-100-05	s	1S2837
D301	8-719-100-05	s	1S2837
D303	8-719-110-07	s	RD10E-B
D304	8-719-100-05	s	1S2837
D305	8-719-100-05	s	1S2837
D306	8-719-100-05	s	1S2837
D310	8-719-100-05	s	1S2837
D311	8-719-224-11	s	10YD2.4A
D312	8-719-100-05	s	1S2837
D313	8-719-100-50	s	RD9.1E-B1

Ref.No.	Parts No.	SP	Description
Q301	8-729-373-92	s	2SB739
Q302	8-729-100-66	s	2SC1623
Q304	8-729-378-84	s	2SD788
Q306	8-729-373-92	s	2SB739
Q307	8-729-100-66	s	2SC1623
Q308	8-729-100-76	s	2SA812
Q309	8-729-100-76	s	2SA812
Q310	8-729-100-66	s	2SC1623
Q311	8-729-100-76	s	2SA812
Q312	8-729-100-66	s	2SC1623
Q313	8-729-100-76	s	2SA812
Q314	8-729-100-66	s	2SC1623
Q315	8-729-100-66	s	2SC1623
Q316	8-729-100-76	s	2SA812
Q317	8-729-100-66	s	2SC1623
Q318	8-729-100-66	s	2SC1623
Q319	8-729-901-06	s	DTA144EK
Q320	8-729-901-06	s	DTA144EK
Q321	8-729-100-76	s	2SA812
Q322	8-729-901-06	s	DTA144EK
Q323	8-729-100-76	s	2SA812
Q324	8-729-901-06	s	DTA144EK
R303	1-215-445-00	s	METAL 10k 1% 1/6W
RV301	1-228-895-00	s	VAR,METAL 100k
RV302	1-228-895-00	s	VAR,METAL 100k
RV303	1-228-888-00	s	VAR,METAL 1k
RY1	1-515-475-00	s	12V,360ohm

AU-51 BOARD

Ref.No.	Parts No.	SP	Description
	A-6713-209-B	o	MOUNTED CIRCUIT BOARD,AU-51 WITH DUS-3

S/N 13481 AND LATER

DUS-3 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-961-11	o	PRINTED CIRCUIT BOARD, DUS-3
LV301	1-407-293-00	s	VAR,1.5mH

AU-51 BOARD

Ref.No.	Parts No.	SP	Description
C1	1-161-013-00	s	CERAMIC 0.01 10% 25V (UC: S/N UP TO 16680) (J : S/N UP TO 11560)
C101	1-131-420-00	s	TANTALUM 4.7 20% 10V
C102	1-163-021-00	s	CERAMIC CHIP 0.01 10% 50V
C103	1-131-419-00	s	TANTALUM 2.2 20% 10V
C105	1-163-021-00	s	CERAMIC CHIP 0.01 10% 50V
C106	1-131-420-00	s	TANTALUM 4.7 20% 10V
C201	1-131-420-00	s	TANTALUM 4.7 20% 10V
C202	1-163-021-00	s	CERAMIC CHIP 0.01 10% 50V
C203	1-131-419-00	s	TANTALUM 2.2 20% 10V
C205	1-163-021-00	s	CERAMIC CHIP 0.01 10% 50V
C206	1-131-420-00	s	TANTALUM 4.7 20% 10V
C304	1-131-422-00	s	TANTALUM 3.3 20% 6.3V
C305	1-131-411-00	s	TANTALUM 1.5 20% 25V
C306	1-124-462-00	s	ELECT 10 20% 16V
C307	1-162-541-11	s	CERAMIC CHIP 470PF 5% 100V

Ref.No.	Parts No.	SP	Description
C308	1-162-542-11	s	CERAMIC CHIP 680PF 5% 100V
C309	1-162-540-11	s	CERAMIC CHIP 0.0015 5% 100V
C310	1-109-677-11	s	MICA 150PF 1% 500V
C311	1-109-677-11	s	MICA 150PF 1% 500V
CN435	1-564-317-00	o	RECEPTACLE,5P
CP301	1-464-372-11	s	OSCILLATOR BLOCK,BIAS/ERASE
D101	8-719-100-05	s	1S2837
D102	8-719-100-03	s	1S2835
D201	8-719-100-05	s	1S2837
D202	8-719-100-03	s	1S2835
D301	8-719-100-50	s	RD9.1E
D302	8-719-110-07	s	RD10E-B
D303	8-719-100-05	s	1S2837
LV301	1-407-293-00	s	1.5mH
Q101	8-729-100-76	s	2SA812
Q102	8-729-100-66	s	2SC1623
Q103	8-729-100-66	s	2SC1623
Q104	8-729-100-66	s	2SC1623
Q105	8-729-100-66	s	2SC1623
Q106	8-729-100-66	s	2SC1623
Q107	8-729-100-76	s	2SA812
Q108	8-729-100-66	s	2SC1623
Q109	8-729-100-66	s	2SC1623
Q110	8-729-100-76	s	2SA812
Q201	8-729-100-76	s	2SA812
Q202	8-729-100-66	s	2SC1623
Q203	8-729-100-66	s	2SC1623
Q204	8-729-100-66	s	2SC1623
Q205	8-729-100-66	s	2SC1623
Q206	8-729-100-66	s	2SC1623
Q207	8-729-100-76	s	2SA812
Q208	8-729-100-66	s	2SC1623
Q209	8-729-100-66	s	2SC1623
Q210	8-729-100-76	s	2SA812
Q301	8-729-901-06	s	DTA144EK
Q302	8-729-982-22	s	2SB822
Q303	8-729-982-22	s	2SB822
Q304	8-729-100-66	s	2SC1623
Q306	8-729-905-52	s	2SD1055
R1	1-202-852-11	s	SOLID 4.7 1/4W
RV101	1-228-896-00	s	VAR,METAL 220K
RV201	1-228-896-00	s	VAR,METAL 220K
RY1	1-515-475-00	s	12V,360ohm

Ref.No.	Parts No.	SP	Description
CM-19 BOARD			
	A-6713-210-A	o	MOUNTED CIRCUIT BOARD,CM-19
C52	1-124-462-00	s	ELECT 10 20% 16V
IC1	8-759-700-84	s	NJM2041M-D(JRC)
IC2	8-759-700-84	s	NJM2041M-D(JRC)
IC3	8-759-700-84	s	NJM2041M-D(JRC)
IC51	8-759-700-84	s	NJM2041M-D(JRC)
IC52	8-759-700-84	s	NJM2041M-D(JRC)
L1	1-407-519-00	s	8uH
L2	1-407-519-00	s	8uH
L51	1-407-519-00	s	8uH
L52	1-407-519-00	s	8uH
Q1	8-729-901-01	s	DTC144EK
R9	1-215-437-00	s	METAL 4.7k 1% 1/6W
R10	1-215-403-00	s	METAL 180 1% 1/6W
R13	1-215-403-00	s	METAL 180 1% 1/6W
R14	1-215-437-00	s	METAL 4.7k 1% 1/6W
R16	1-215-437-00	s	METAL 4.7k 1% 1/6W
R17	1-215-437-00	s	METAL 4.7k 1% 1/6W
R60	1-215-403-00	s	METAL 180 1% 1/6W
R63	1-215-437-00	s	METAL 4.7k 1% 1/6W
R66	1-215-403-00	s	METAL 180 1% 1/6W
R67	1-215-437-00	s	METAL 4.7k 1% 1/6W
R68	1-215-437-00	s	METAL 4.7k 1% 1/6W
R69	1-215-437-00	s	METAL 4.7k 1% 1/6W
RV1	1-228-457-00	s	VAR,CERMET 2k
RV51	1-228-457-00	s	VAR,CERMET 2k
S1	1-554-970-11	s	SLIDE "CH-1 MIC/LINE"
S2	1-554-972-11	s	SLIDE "-20dB/-60dB CAMERA INPUT LEVEL"
S3	1-554-971-11	s	SLIDE "CH-2 MIC/CAMERA/LINE"
S4	1-554-972-11	s	SLIDE "VIDEO IN"
S5	1-554-971-11	s	SLIDE "MONITOR"
DU-58 BOARD			
	1-611-954-11	o	PRINTED CIRCUIT BOARD,DU-58
DU-79 BOARD			
	1-611-958-11	o	PRINTED CIRCUIT BOARD,DU-79
DUS-4 BOARD			
	1-611-963-11	o	PRINTED CIRCUIT BOARD,DUS-4
S1	1-554-251-00	s	REED, "TENREG"

DUS-5 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-964-11	o	PRINTED CIRCUIT BOARD, DUS-5
SB1	8-719-919-10	s	55M22LS

DUS-6 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-965-11	o	PRINTED CIRCUIT BOARD,DUS-6
RV1	1-230-553-11	s	VAR,CARBON 100k "TRACKING"

KY-53 BOARD

Ref.No.	Parts No.	SP	Description
	A-6717-365-B	o	MOUNTED CIRCUIT BOARD,KY-53
	1-807-338-11	s	LIQUID CRYSTAL
C17	1-163-109-00	s	CERAMIC CHIP 47PF 5% 50V
C21	1-163-105-00	s	CERAMIC CHIP 33PF 5% 50V
C22	1-163-105-00	s	CERAMIC CHIP 33PF 5% 50V
C23	1-124-470-11	s	ELECT 470 20% 6.3V
C24	1-124-470-11	s	ELECT 470 20% 6.3V
C25	1-124-470-11	s	ELECT 470 20% 6.3V
C26	1-124-470-11	s	ELECT 470 20% 6.3V
C27	1-124-470-11	s	ELECT 470 20% 6.3V
C29	1-131-387-00	s	TANTALUM 47 20% 6.3V
C412	1-214-470-11	s	ELECT 470 20% 6.3V
D1	8-719-955-05	s	BR5505S
D2	8-719-955-05	s	BR5505S
D3	8-719-955-05	s	BR5505S
D4	8-719-955-05	s	BR5505S
D5	8-719-955-05	s	BR5505S
D6	8-719-955-05	s	BR5505S
D7	8-719-955-05	s	BR5505S
D8	8-719-955-05	s	BR5505S
D9	8-719-955-05	s	BR5505S
D10	8-719-955-05	s	BR5505S
D11	8-719-955-05	s	BR5505S
D12	8-719-101-23	s	1SS123
D13	8-719-101-23	s	1SS123
D14	8-719-101-23	s	1SS123
D15	8-719-101-23	s	1SS123
IC1	8-759-911-65	s	MSM58421-74GSK(OKI)
IC2	8-759-201-05	s	TC4056BF(TOSHIBA)
IC3	8-759-200-83	s	TC4071BF(TOSHIBA)
IC4	8-759-200-92	s	TC5012BF(TOSHIBA)
IC5	8-759-200-68	s	TC4011BF(TOSHIBA)
IC7	8-759-700-43	s	NJM4558M(JRC)
PL1	1-518-566-11	s	FOR LCD
PL2	1-518-566-11	s	FOR LCD
Q1	8-729-378-91	s	2SD789
Q2	8-729-901-01	s	DTC144EK
Q3	8-729-901-01	s	DTC144EK
Q4	8-729-901-01	s	DTC144EK
Q5	8-729-967-32	s	2SC2673
Q6	8-729-900-52	s	DTC114YK
Q7	8-729-900-52	s	DTC114YK
Q8	8-729-900-52	s	DTC114YK
Q9	8-729-900-52	s	DTC114YK
Q10	8-729-900-52	s	DTC114YK
Q11	8-729-900-52	s	DTC114YK
Q12	8-729-900-52	s	DTC114YK
Q13	8-729-900-52	s	DTC114YK
Q14	8-729-900-52	s	DTC114YK
Q15	8-729-900-52	s	DTC114YK
Q16	8-729-100-66	s	2SC1623
Q17	8-729-901-46	s	DTA114YK
Q18	8-729-100-76	s	2SA812
Q19	8-729-901-01	s	DTC144EK
R50	1-247-710-11	s	CARBON 560 5% 1/4W
R51	1-247-710-11	s	CARBON 560 5% 1/4W
R52	1-247-710-11	s	CARBON 560 5% 1/4W
R53	1-247-710-11	s	CARBON 560 5% 1/4W
R54	1-247-710-11	s	CARBON 560 5% 1/4W
R55	1-247-710-11	s	CARBON 560 5% 1/4W
R56	1-247-710-11	s	CARBON 560 5% 1/4W
R57	1-247-710-11	s	CARBON 560 5% 1/4W
R58	1-247-710-11	s	CARBON 560 5% 1/4W
R59	1-247-710-11	s	CARBON 560 5% 1/4W
RV1	1-230-541-11	s	VAR,CARBON 10k
RV2	1-230-541-11	s	VAR,CARBON 10k
S1	1-554-303-21	s	KEY "RESET"
S3	1-554-303-21	s	KEY "LIGHT"
S4	1-553-739-21	s	KEY "STOP"
S5	1-553-739-21	s	KEY "FF"
S6	1-553-739-21	s	KEY "FWD"
S7	1-553-739-21	s	KEY "REW"
S8	1-553-739-21	s	KEY "REC"
S9	1-553-739-21	s	KEY "DUB"
S10	1-553-739-21	s	KEY "PAUSE"
X1	1-567-170-00	s	OSC. CERAMIC 4.19MHz

LE-20 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-956-11	o	PRINTED CIRCUIT BOARD, LE-20
D1	8-719-900-07	s	KL-1

LE-21 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-957-11	o	PRINTED CIRCUIT BOARD, LE-21
D1	8-719-900-07	s	KL-1

Ref.No.	Parts No.	SP	Description
PC-22 BOARD			
	1-611-960-11	o	PRINTED CIRCUIT BOARD, PC-22
IC1	8-719-800-81	s	TLP801A
PS-42 BOARD			
	A-6723-248-B	o	MOUNTED CIRCUIT BOARD,PS-42
	1-533-037-xx	s	HOLDER, FUSE
BM1	A-3215-513-A	s	BATTERY MIRROR
C24	1-124-343-00	s	ELECT 2200 20% 16V
C25	1-124-556-00	s	ELECT 2200 20% 16V
C26	1-124-556-00	s	ELECT 2200 20% 16V
C27	1-124-556-00	s	ELECT 2200 20% 16V
C32	1-124-133-00	s	ELECT 220 20% 6.3V
C701	1-124-589-11	s	ELECT 47 20% 16V
C702	1-124-589-11	s	ELECT 47 20% 16V
C703	1-124-589-11	s	ELECT 47 20% 16V
C704	1-124-589-11	s	ELECT 47 20% 16V
C706	1-163-205-00	s	CERAMIC CHIP 0.001 5% 50V
CN702	1-508-904-00	o	RECEPTACLE,6P
	1-509-987-00	s	HOUSING,6P
	1-509-982-00	s	CONTACT
CN703	1-508-905-00	o	RECEPTACLE,8P
	1-509-988-00	o	HOUSING,8P
	1-509-982-00	o	CONTACT
D4	8-719-200-02	s	10E-2
D5	8-719-136-07	s	RD3.6E-B
D6	8-719-162-07	s	RD6.2E-B
D7	8-719-162-07	s	RD6.2E-B
D8	8-719-162-07	s	RD6.2E-B
D9	8-719-162-07	s	RD6.2E-B
D11	8-719-136-07	s	RD3.6E-B
D12	8-719-910-96	s	HZ9B3L
D13	8-719-100-03	s	1S2835
D14	8-719-100-03	s	1S2835
D15	8-719-100-03	s	1S2835
D16	8-719-100-03	s	1S2835
D17	8-719-100-03	s	1S2835
D18	8-719-100-03	s	1S2835
D19	8-719-100-03	s	1S2835
D20	8-719-101-62	s	RD6.2EL3
DDC1	1-464-368-11	s	CONVERTER, DC-DC

Ref.No.	Parts No.	SP	Description
⚠ F1	1-532-705-11	s	FUSE,6.3A/125V
FB1	1-535-178-00	s	FERRITE
IC3	8-759-155-00	s	uPC4558C(NEC)
Q5	8-729-882-52	s	2SB825-R
Q6	8-729-315-63	s	2SB856
Q7	8-729-882-52	s	2SB825-R
Q8	8-729-600-60	s	2SA1115P
Q9	8-729-177-43	s	2SD774
Q11	8-729-900-52	s	DTC114YK
Q12	8-729-900-52	s	DTC114YK
Q13	8-729-900-52	s	DTC114YK
Q14	8-729-900-52	s	DTC114YK
Q15	8-729-100-76	s	2SA812
Q16	8-729-100-76	s	2SA812
Q17	8-729-900-52	s	DTC114YK
Q18	8-729-900-52	s	DTC114YK
Q19	8-729-900-52	s	DTC114YK
Q20	8-729-900-52	s	DTC114YK
Q21	8-729-100-76	s	2SA812
Q22	8-729-100-76	s	2SA812
Q24	8-729-900-52	s	DTC114YK
Q25	8-729-900-52	s	DTC114YK
Q26	8-729-100-76	s	2SA812
Q27	8-729-901-01	s	DTC144EK
Q28	8-729-901-01	s	DTC144EK
Q29	8-729-901-01	s	DTC144EK
R68	1-532-605-00	s	LINK, IC
R69	1-532-605-00	s	LINK, IC
R70	1-532-637-00	s	LINK, IC
R73	1-247-107-00	s	CARBON 100 5% 1/5W
R74	1-247-107-00	s	CARBON 100 5% 1/5W
R75	1-247-107-00	s	CARBON 100 5% 1/5W
R76	1-247-107-00	s	CARBON 100 5% 1/5W
R79	1-532-605-00	s	LINK, IC
R85	1-215-428-00	s	METAL 2k 1% 1/6W
R86	1-215-459-00	s	METAL 39k 1% 1/6W
RV3	1-228-888-00	s	VAR,METAL 1k
RV4	1-228-888-00	s	VAR,METAL 1k
RV6	1-228-891-00	s	VAR,METAL 10k

Ref.No.	Parts No.	SP	Description
RP-16 BOARD			
	A-6711-547-B	o	MOUNTED CIRCUIT BOARD,RP-16
C2	1-124-584-41	s	ELECT 100 20% 10V
C11	1-123-333-00	s	ELECT 100 20% 25V
C15	1-123-333-00	s	ELECT 100 20% 25V
CN631	1-564-684-11	o	RECEPTACLE,6P
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
IC1	8-743-731-00	s	BX373A(SONY)
IC2	8-743-740-00	s	BX374(SONY)
IC3	8-743-500-00	s	BX350(SONY)
IC4	8-743-500-00	s	BX350(SONY)
Q1	8-729-201-04	s	2SC2878
Q2	8-729-201-04	s	2SC2878
R1	1-215-394-00	s	METAL 75 1% 1/6W
R4	1-215-414-00	s	METAL 510 1% 1/6W
R6	1-214-688-11	s	METAL 20 1% 1/4W
R7	1-214-688-11	s	METAL 20 1% 1/4W
R8	1-214-688-11	s	METAL 20 1% 1/4W
R9	1-214-688-11	s	METAL 20 1% 1/4W
R23	1-247-082-00	s	SOLID 6.8 5% 1/4W
RV1	1-228-889-00	s	VAR,METAL 2.2k
RV2	1-228-889-00	s	VAR,METAL 2.2k
RV3	1-228-890-00	s	VAR,METAL 4.7k
RV4	1-228-890-00	s	VAR,METAL 4.7k
RV5	1-228-889-00	s	VAR,METAL 2.2k
RV6	1-228-895-00	s	VAR,METAL 100k
RV7	1-228-889-00	s	VAR,METAL 2.2k
RV8	1-228-895-00	s	VAR,METAL 100k
T1	1-426-199-11	s	HIGH FREQUENCY
T2	1-426-197-11	s	HIGH FREQUENCY
T3	1-426-197-11	s	HIGH FREQUENCY
T4	1-426-198-11	s	HIGH FREQUENCY
T5	1-426-198-11	s	HIGH FREQUENCY

Ref.No.	Parts No.	SP	Description
SV-57 BOARD			
	A-6715-230-B	o	MOUNTED CIRCUIT BOARD,SV-57
C2	1-124-135-00	s	ELECT 470 20% 6.3V
C4	1-130-487-00	s	MYLAR 0.022 5% 50V
C6	1-130-487-00	s	MYLAR 0.022 5% 50V
C8	1-130-487-00	s	MYLAR 0.022 5% 50V
C9	1-130-483-00	s	MYLAR 0.01 5% 50V
C10	1-130-485-00	s	MYLAR 0.015 5% 50V
C11	1-130-483-00	s	MYLAR 0.01 5% 50V
C13	1-163-251-00	s	CERAMIC CHIP 100PF 5% 50V
C19	1-107-078-00	s	MICA 51PF 5% 50V
C26	1-130-481-00	s	MYLAR 0.0068 5% 50V
C29	1-131-343-00	s	TANTALUM 0.22 10% 35V
C41	1-136-162-00	s	MYLAR 0.056 5% 50V
C42	1-136-160-00	s	MYLAR 0.039 5% 50V
C43	1-130-491-00	s	MYLAR 0.047 5% 50V
C44	1-130-483-00	s	MYLAR 0.01 5% 50V
C45	1-130-481-00	s	MYLAR 0.0068 5% 50V
C46	1-130-489-00	s	MYLAR 0.033 5% 50V
C51	1-130-497-00	s	MYLAR 0.15 5% 50V
C57	1-131-341-00	s	TANTALUM 0.1 10% 35V
C61	1-123-321-00	s	ELECT 220 20% 16V
C67	1-130-491-00	s	MYLAR 0.047 5% 50V
C69	1-136-162-00	s	MYLAR 0.056 5% 50V
C74	1-123-321-00	s	ELECT 220 20% 16V
C79	1-130-479-00	s	MYLAR 0.0047 5% 50V
C83	1-130-477-00	s	MYLAR 0.0033 5% 50V
C90	1-123-321-00	s	ELECT 220 20% 16V
C92	1-123-321-00	s	ELECT 220 20% 16V
C94	1-123-321-00	s	ELECT 220 20% 16V
C123	1-163-243-00	s	CERAMIC CHIP 47PF 5% 50V
C127	1-163-227-00	s	CELAMIC CHIP 10PF 5% 50V
C128	1-102-110-00	s	CELAMIC 220PF 10% 50V
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-100-05	s	1S2837
D6	8-719-101-23	s	1SS123
D7	8-719-101-23	s	1SS123
D8	8-719-101-23	s	1SS123
D10	8-719-100-03	s	1S2835
D11	8-719-100-03	s	1S2835
D12	8-719-100-03	s	1S2835
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-101-23	s	1SS123
D16	8-719-101-23	s	1SS123
D17	8-719-100-05	s	1S2837
D18	8-719-191-07	s	RD9.1E
D19	8-719-982-04	s	ERB81-004
D20	8-719-911-19	s	1SS119
D21	8-719-100-05	s	1S2837
D22	8-719-100-05	s	1S2837
D23	8-719-191-07	s	RD9.1E
D24	8-719-982-04	s	ERB81-004
D25	8-719-101-23	s	1SS123
D26	8-719-101-23	s	1SS123
D27	8-719-911-19	s	1SS119
D28	8-719-100-05	s	1S2837
D30	8-719-911-19	s	1SS119
D31	8-719-982-04	s	ERB81-004
D32	8-719-100-03	s	1S2835
D33	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
D34	8-719-101-23	s	1SS123
D35	8-719-101-76	s	RD10EL2
D36	8-719-911-19	s	1SS119
D38	8-719-100-05	s	1S2837
D39	8-719-100-05	s	1S2837
D40	8-719-100-03	s	1S2835
D41	8-719-911-19	s	1SS119
D44	8-719-100-03	s	1S2835
IC1	8-751-941-03	s	CX194B-3(SONY)
IC2	8-749-909-15	s	BX3915A(SONY)
IC3	8-759-200-68	s	TC4011BF(TOSHIBA)
IC4	8-759-200-90	s	TC4538BF(TOSHIBA)
IC5	8-759-200-68	s	TC4011BF(TOSHIBA)
IC6	8-759-200-68	s	TC4011BF(TOSHIBA)
IC7	8-759-200-82	s	TC4069UBF(TOSHIBA)
IC8	8-759-200-80	s	TC4050BF(TOSHIBA)
IC9	8-759-200-90	s	TC4538BF(TOSHIBA)
IC10	8-759-200-90	s	TC4538BF(TOSHIBA)
IC11	8-759-200-90	s	TC4538BF(TOSHIBA)
IC12	8-759-200-82	s	TC4069UBF(TOSHIBA)
IC13	8-759-100-95	s	uPC324G2(NEC)
IC14	8-759-100-95	s	uPC324G2(NEC)
IC15	8-759-100-95	s	uPC324G2(NEC)
IC16	8-759-100-93	s	uPC393G2(NEC)
IC17	8-759-200-82	s	TC4069UBF(TOSHIBA)
IC18	8-759-200-67	s	TC4001BF(TOSHIBA)
IC19	8-759-100-93	s	uPC393G2(NEC)
IC20	8-759-100-93	s	uPC393G2(NEC)
IC21	8-759-200-78	s	TC4030BF(TOSHIBA)
IC22	8-759-200-81	s	TC4053BF(TOSHIBA)
IC23	8-759-200-81	s	TC4053BF(TOSHIBA)
IC24	8-759-200-81	s	TC4053BF(TOSHIBA)
IC25	8-759-200-65	s	TC4013BF(TOSHIBA)
IC26	8-759-100-93	s	uPC393G2(NEC)
IC27	8-759-200-81	s	TC4053BF(TOSHIBA)
IC28	8-759-100-96	s	uPC4558G2(NEC)
IC29	8-759-200-90	s	TC4538BF(TOSHIBA)
L1	1-459-155-00	s	45uH
L2	1-408-298-00	s	2mH
L3	1-408-298-00	s	2mH
L4	1-408-298-00	s	2mH
Q1	8-729-100-66	s	2SC1623
Q2	8-729-100-76	s	2SA812
Q3	8-729-100-66	s	2SC1623
Q4	8-729-603-50	s	2SC403SP
Q5	8-729-901-06	s	DTA144EK
Q6	8-729-901-01	s	DTC144EK
Q7	8-729-100-66	s	2SC1623
Q8	8-729-100-66	s	2SC1623
Q9	8-729-100-66	s	2SC1623
Q10	8-729-100-66	s	2SC1623
Q11	8-729-100-76	s	2SA812
Q12	8-729-901-01	s	DTC144EK
Q13	8-729-901-01	s	DTC144EK
Q14	8-729-901-01	s	DTC144EK
Q15	8-729-901-06	s	DTA144EK
Q16	8-729-100-76	s	2SA812
Q17	8-729-202-62	s	2SD1221
Q18	8-729-100-76	s	2SA812
Q19	8-729-202-62	s	2SD1221
Q20	8-729-901-01	s	DTC144EK
Q21	8-729-901-01	s	DTC144EK
Q22	8-729-901-01	s	DTC144EK
Q23	8-729-901-06	s	DTA144EK
Q24	8-729-100-76	s	2SA812
Q25	8-729-100-04	s	2SD992-K
Q26	8-729-100-66	s	2SC1623
Q27	8-729-100-66	s	2SC1623
Q28	8-729-901-01	s	DTC144EK
Q29	8-729-901-01	s	DTC144EK
Q30	8-729-901-06	s	DTA144EK
Q31	8-729-901-01	s	DTC144EK
Q32	8-729-901-06	s	DTA144EK
Q33	8-729-100-76	s	2SA812
Q34	8-729-202-62	s	2SD1221
Q35	8-729-100-76	s	2SA812
Q36	8-729-202-62	s	2SD1221
Q37	8-729-100-66	s	2SC1623
Q38	8-729-100-66	s	2SC1623
Q39	8-729-100-66	s	2SC1623
Q40	8-729-100-66	s	2SC1623
Q41	8-729-100-66	s	2SC1623
Q42	8-729-100-66	s	2SC1623
Q43	8-729-100-66	s	2SC1623
Q44	8-729-100-66	s	2SC1623
Q45	8-729-901-01	s	DTC144EK
Q46	8-729-100-76	s	2SA812
Q47	8-729-901-01	s	DTC144EK
Q48	8-729-175-13	s	2SC2757
Q49	8-729-901-06	s	DTA144EK
Q50	8-729-901-06	s	DTA144EK
Q51	8-729-901-06	s	DTA144EK
Q52	8-729-901-06	s	DTA144EK
Q53	8-729-901-01	s	DTC144EK
Q54	8-729-100-76	s	2SA812
R1	1-215-373-00	s	METAL 10 1% 1/6W
R73	1-215-483-00	s	METAL 390K 1% 1/6W
R212	1-215-478-00	s	METAL 240K 1% 1/6W
R256	1-207-616-00	s	WIREWOUND 0.47 10% 3W
R258	1-532-675-00	s	LINK, IC
R259	1-532-686-00	s	LINK, IC
R274	1-215-373-00	s	METAL 10 1% 1/6W
RV1	1-228-895-00	s	VAR,METAL 100k
RV2	1-228-894-00	s	VAR,METAL 47k
RV3	1-228-895-00	s	VAR,METAL 100k
RV4	1-228-894-00	s	VAR,METAL 47k
RV5	1-228-895-00	s	VAR,METAL 100k
RV6	1-228-897-00	s	VAR,METAL 470k
RV7	1-228-894-00	s	VAR,METAL 47k
RV8	1-228-897-00	s	VAR,METAL 470k
RV9	1-228-890-00	s	VAR,METAL 4.7k
RV10	1-228-888-00	s	VAR,METAL 1k
RV11	1-228-894-00	s	VAR,METAL 47k
RV12	1-228-891-00	s	VAR,METAL 10k
RV13	1-228-895-00	s	VAR,METAL 100k
RV14	1-228-896-00	s	VAR,METAL 220K
X1	1-567-145-00	s	OSC. CRYSTAL 3.579545MHz

SW-29 BOARD

Ref.No.	Parts No.	SP	Description
	1-611-955-11	o	PRINTED CIRCUIT BOARD,SW-29
S1	1-553-977-00	s	SLIDE, "AUDIO LEVEL"
S2	1-553-977-00	s	SLIDE, "METER SELECT"

SY-18 BOARD

Ref.No.	Parts No.	SP	Description
	A-6717-362-B	o	MOUNTED CIRCUIT BOARD,SY-18 WITH DUS-33

DUS-33 BOARD

Ref.No.	Parts No.	SP	Description
	1-613-317-11	o	PRINTED CIRCUIT BOARD,DUS-33
LV1	1-459-434-00	s	22mH
LV2	1-459-434-00	s	22mH

SY-18 BOARD

Ref.No.	Parts No.	SP	Description
C7	1-163-133-00	s	CERAMIC CHIP 470PF 5% 50V
C8	1-131-381-00	s	TANTALUM 47 20% 10V
C10	1-124-435-00	s	ELECT 10 20% 6.3V
C11	1-124-438-00	s	ELECT 1 20% 50V
C13	1-163-117-00	s	CERAMIC CHIP 100PF 5% 50V
C16	1-163-117-00	s	CERAMIC CHIP 100PF 5% 50V
C17	1-163-133-00	s	CERAMIC CHIP 470PF 5% 50V
C19	1-124-462-00	s	ELECT 10 20% 16V
C23	1-124-435-00	s	ELECT 10 20% 6.3V
C23	1-124-435-00	s	ELECT 10 20% 6.3V
C27	1-124-435-00	s	ELECT 10 20% 6.3V
C27	1-124-435-00	s	ELECT 10 20% 6.3V
C28	1-163-141-00	s	CERAMIC CHIP 0.001 5% 50V
C29	1-163-141-00	s	CERAMIC CHIP 0.001 5% 50V
C31	1-163-239-00	s	CERAMIC CHIP 33PF 5% 50V
C32	1-163-239-00	s	CERAMIC CHIP 33PF 5% 50V
C33	1-163-235-00	s	CERAMIC CHIP 22PF 5% 50V
C34	1-163-235-00	s	CERAMIC CHIP 22PF 5% 50V
C36	1-124-435-00	s	ELECT 10 20% 6.3V
C36	1-124-435-00	s	ELECT 10 20% 6.3V
C37	1-130-473-00	s	MYLAR 0.0015 5% 50V
C38	1-124-464-11	s	ELECT 0.22 20% 50V
C42	1-124-465-00	s	ELECT 0.47 20% 50V
C43	1-124-435-00	s	ELECT 10 20% 6.3V
C43	1-124-435-00	s	ELECT 10 20% 6.3V
C44	1-130-473-00	s	MYLAR 0.0015 5% 50V
C45	1-124-464-11	s	ELECT 0.22 20% 50V
C49	1-124-465-00	s	ELECT 0.47 20% 50V
C51	1-124-465-00	s	ELECT 0.47 20% 50V
C53	1-124-465-00	s	ELECT 0.47 20% 50V
C54	1-124-465-00	s	ELECT 0.47 20% 50V
C62	1-162-059-00	s	CERAMIC 0.047 10% 50V
CN1	1-564-317-00	o	5P,BOARD TO BOARD
CN141	1-564-630-11	o	RECEPTACLE,14P
CN144	1-564-630-11	o	RECEPTACLE,14P

Ref.No.	Parts No.	SP	Description
D1	8-719-100-05	s	1S2837
D2	8-719-100-05	s	1S2837
D3	8-719-100-37	s	RD6.2EB1
D4	8-719-911-19	s	1SS119
D5	8-719-100-05	s	1S2837
D6	8-719-100-05	s	1S2837
D8	8-719-100-03	s	1S2835
D9	8-719-100-05	s	1S2837
D10	8-719-911-19	s	1SS119
D11	8-719-101-43	s	RD4.3EL2
D12	8-719-911-19	s	1SS119
D13	8-719-101-32	s	RD2.7EL1
D14	8-719-100-05	s	1S2837
D15	8-719-100-05	s	1S2837
D16	8-719-100-03	s	1S2835
D17	8-719-100-05	s	1S2837
D18	8-719-100-05	s	1S2837
D19	8-719-100-05	s	1S2837
D20	8-719-100-05	s	1S2837
D21	8-719-911-19	s	1SS119
D22	8-719-911-19	s	1SS119
D24	8-719-100-03	s	1S2835
IC1	8-759-911-73	s	MB88501-255M(FUJITSU)
IC2	8-759-911-71	s	MB88501-256M(FUJITSU)
IC3	8-759-200-88	s	TC4512BF(TOSHIBA)
IC4	8-759-200-88	s	TC4512BF(TOSHIBA)
IC5	8-759-200-88	s	TC4512BF(TOSHIBA)
IC6	8-759-200-88	s	TC4512BF(TOSHIBA)
IC7	8-759-102-82	s	uPD82C43G(NEC)
IC8	8-759-102-82	s	uPD82C43G(NEC)
IC9	8-759-913-99	s	MB88201-173N(FUJITSU)
IC10	8-759-201-53	s	TC40H000F(TOSHIBA)
IC11	8-759-204-20	s	TC4024BF(TOSHIBA)
IC12	8-759-200-68	s	TC4011BF(TOSHIBA)
IC13	8-759-700-07	s	NJM2903M(JRC)
IC15	8-759-745-64	s	NJM4560M(JRC)
IC16	8-759-200-78	s	TC4030BF(TOSHIBA)
IC17	8-759-700-07	s	NJM2903M(JRC)
IC18	8-759-200-90	s	TC4538BF(TOSHIBA)
IC19	8-759-200-84	s	TC4081BF(TOSHIBA)
IC20	8-759-200-68	s	TC4011BF(TOSHIBA)
IC21	8-759-200-84	s	TC4081BF(TOSHIBA)
IC22	8-759-200-84	s	TC4081BF(TOSHIBA)
IC23	8-759-200-81	s	TC4053BF(TOSHIBA)
IC24	8-759-200-90	s	TC4538BF(TOSHIBA)
Q1	8-729-100-76	s	2SA812
Q2	8-729-100-76	s	2SA812
Q3	8-729-100-66	s	2SC1623
Q4	8-729-100-66	s	2SC1623
Q5	8-729-901-01	s	DTC144EK
Q6	8-729-901-01	s	DTC144EK
Q7	8-729-901-01	s	DTC144EK
Q8	8-729-901-01	s	DTC144EK
Q9	8-729-901-06	s	DTA144EK
Q10	8-729-901-01	s	DTC144EK
Q11	8-729-100-66	s	2SC1623
Q12	8-729-100-66	s	2SC1623
Q13	8-729-901-06	s	DTA144EK
Q14	8-729-901-01	s	DTC144EK
Q15	8-729-901-01	s	DTC144EK
Q16	8-729-901-06	s	DTA144EK
Q17	8-729-901-01	s	DTC144EK
Q18	8-729-901-01	s	DTC144EK
Q19	8-729-901-01	s	DTC144EK
Q20	8-729-901-06	s	DTA144EK

Ref.No.	Parts No.	SP	Description
Q22	8-729-901-01	s	DTC144EK
Q23	8-729-901-01	s	DTC144EK
Q25	8-729-901-01	s	DTC144EK
Q27	8-729-901-01	s	DTC144EK
Q28	8-729-901-01	s	DTC144EK
Q29	8-729-901-01	s	DTC144EK
Q30	8-729-901-01	s	DTC144EK
Q32	8-729-100-66	s	2SC1623
Q33	8-729-100-66	s	2SC1623
Q34	8-729-100-76	s	2SA812
Q35	8-729-901-01	s	DTC144EK
Q36	8-729-901-06	s	DTA144EK
Q37	8-729-901-01	s	DTC144EK
R54	1-215-419-00	s	METAL 820 1% 1/6W
R55	1-215-452-00	s	METAL 20K 1% 1/6W
R71	1-215-447-00	s	METAL 12K 1% 1/6W
R72	1-215-451-00	s	METAL 18K 1% 1/6W
RV1	1-228-395-00	s	VAR,METAL 10k
RV2	1-228-813-00	s	VAR,METAL 470k
RV3	1-228-813-00	s	VAR,METAL 470k
X1	1-567-502-11	s	OSC. CRYSTAL 3.579545MHz
X2	1-527-822-00	s	OSC. CERAMIC 4.0MHz

SY-22 BOARD

Ref.No.	Parts No.	SP	Description
	A-6717-364-B	o	MOUNTED CIRCUIT BOARD,SY-22 WITH SY-23

SY-22 BOARD

Ref.No.	Parts No.	SP	Description
	1-557-607-11	o	FLAT CABLE,19P
C5	1-163-235-00	s	CERAMIC CHIP 22PF 5% 50V
C9	1-102-114-00	s	CERAMIC 470PF 10% 50V
C11	1-102-114-00	s	CERAMIC 470PF 10% 50V
C36	1-124-438-00	s	ELECT 1 20% 50V
C38	1-124-343-00	s	ELECT 2200 20% 16V
C39	1-124-343-00	s	ELECT 2200 20% 16V
C40	1-124-343-00	s	ELECT 2200 20% 16V
D1	8-719-101-23	s	1SS123
D2	8-719-101-23	s	1S2835
D3	8-719-101-23	s	1S2835
D4	8-719-101-23	s	1S2835
D5	8-719-101-23	s	1S2835
D6	8-719-101-23	s	1S2835
D7	8-719-101-23	s	1S2835
D8	8-719-100-05	s	1S2837
D9	8-719-100-05	s	1S2837
D10	8-719-815-55	s	1S1555
D11	8-719-815-55	s	1S1555
IC1	8-759-201-60	s	TC40H002F(TOSHIBA)
IC2	8-759-911-72	s	MB88501-247M(OKI)
IC3	8-759-201-47	s	TA7357AP(TOSHIBA)
IC4	8-759-400-89	s	MN1237AD(MATSUSHITA)
IC5	8-759-102-82	s	uPD82C43G(NEC)
IC6	8-759-200-67	s	TC4001BF(TOSHIBA)
IC7	8-759-600-24	s	M54543L(MITSUBISHI)
IC8	8-759-200-90	s	TC4538BF(TOSHIBA)
IC9	8-759-102-82	s	uPD82C43G(NEC)
IC10	8-759-200-79	s	TC4049BF(TOSHIBA)
Q1	8-729-100-66	s	2SC1623
Q2	8-729-901-01	s	DTC144EK
Q3	8-729-901-01	s	DTC144EK
Q8	8-729-901-01	s	DTC144EK
Q9	8-729-901-01	s	DTC144EK
Q10	8-729-901-01	s	DTC144EK
Q11	8-729-901-06	s	DTA144EK
Q12	8-729-901-06	s	DTA144EK
Q13	8-729-901-01	s	DTC144EK
Q14	8-729-901-01	s	DTC144EK
Q15	8-729-901-06	s	DTA144EK
Q16	8-729-901-01	s	DTC144EK
Q17	8-729-901-06	s	DTA144EK
Q19	8-729-901-01	s	DTC144EK
Q20	8-729-901-01	s	DTC144EK
Q22	8-729-901-01	s	DTC144EK
Q23	8-729-901-06	s	DTA144EK
Q24	8-729-901-01	s	DTC144EK
Q25	8-729-901-01	s	DTC144EK
Q26	8-729-901-01	s	DTC144EK
R23	1-215-478-00	s	METAL 240k 1% 1/6W
R24	1-215-471-00	s	METAL 120k 1% 1/6W
R25	1-215-464-00	s	METAL 62k 1% 1/6W
R120	1-532-686-21	s	LINK, IC
R121	1-532-686-21	s	LINK, IC
R122	1-532-686-21	s	LINK, IC
RV1	1-228-394-00	s	VAR,METAL 4.7k
RV2	1-228-760-00	s	VAR,METAL 47k
S1	1-553-977-00	s	SLIDE "TEST DISPLAY"

SY-23 BOARD

Ref.No.	Parts No.	SP	Description
	1-613-101-12	o	PRINTED CIRCUIT BOARD,SY-23
C3	1-124-436-21	s	ELECT 3.3 20% 25V
D1	8-719-981-01	s	ERA81-004
D2	8-719-100-05	s	1S2837
D3	8-719-200-02	s	10E-2
D4	8-719-160-63	s	RD15FB3
D5	8-719-981-01	s	ERA81-004
D6	8-719-100-05	s	1S2837
D7	8-719-200-02	s	10E-2
D8	8-719-160-63	s	RD15FB3
D9	8-719-200-02	s	10E-2
D10	8-719-160-63	s	RD15FB3
D11	8-719-981-01	s	ERA81-004
D12	8-719-100-05	s	1S2837
D13	8-719-200-02	s	10E-2
D14	8-719-160-63	s	RD15FB3
D15	8-719-200-02	s	10E-2

Ref.No.	Parts No.	SP	Description
D16	8-719-160-63	s	RD15FB3
D17	8-719-200-02	s	10E-2
D18	8-719-160-63	s	RD15FB3
D20	8-719-100-05	s	1S2837
D21	8-719-100-05	s	1S2837
IC1	8-759-200-80	s	TC4050BF(TOSHIBA)
IC2	8-759-200-80	s	TC4050BF(TOSHIBA)
Q2	8-729-901-01	s	DTC144EK
Q3	8-729-901-46	s	DTA114YK
Q4	8-729-200-46	s	2SD1160
Q5	8-729-901-01	s	DTC144EK
Q6	8-729-901-01	s	DTC144EK
Q7	8-729-901-46	s	DTA114YK
Q8	8-729-200-46	s	2SD1160
Q10	8-729-901-01	s	DTC144EK
Q11	8-729-901-46	s	DTA114YK
Q12	8-729-200-46	s	2SD1160
Q13	8-729-901-01	s	DTC144EK
Q14	8-729-901-01	s	DTC144EK
Q15	8-729-901-46	s	DTA114YK
Q16	8-729-200-46	s	2SD1160
Q17	8-729-901-01	s	DTC144EK
Q18	8-729-901-46	s	DTA114YK
Q19	8-729-200-46	s	2SD1160
Q20	8-729-901-01	s	DTC144EK
Q21	8-729-901-46	s	DTA114YK
Q22	8-729-200-46	s	2SD1160
Q24	8-729-901-01	s	DTC144EK
Q25	8-729-901-46	s	DTA114YK
Q26	8-729-200-46	s	2SD1160
Q27	8-729-901-01	s	DTC144EK
Q28	8-729-901-01	s	DTC144EK
Q29	8-729-901-46	s	DTA114YK
Q30	8-729-200-46	s	2SD1160
Q31	8-729-901-01	s	DTC144EK
Q32	8-729-901-46	s	DTA114YK
Q33	8-729-200-46	s	2SD1160
Q34	8-729-901-01	s	DTC144EK
Q35	8-729-901-46	s	DTA114YK
Q36	8-729-200-46	s	2SD1160
Q37	8-729-901-01	s	DTC144EK
Q38	8-729-901-46	s	DTA114YK
Q39	8-729-200-46	s	2SD1160
Q40	8-729-901-01	s	DTC144EK
Q41	8-729-901-46	s	DTA114YK
Q42	8-729-200-46	s	2SD1160
Q43	8-729-901-46	s	DTA114YK

Ref.No.	Parts No.	SP	Description
TM-19 BOARD			
	1-613-881-11	o	PRINTED CIRCUIT BOARD,TM-19
	1-548-119-21	s	HOURS METER
VO-11 BOARD			
	A-6711-543-B	o	MOUNTED CIRCUIT BOARD,VO-11
C26	1-107-206-00	s	MICA 15PF 5% 500V
C33	1-123-333-00	s	ELECT 100 20% 25V
C36	1-106-172-00	s	MYLAR 0.001 5% 100V
C37	1-163-035-00	s	CERAMIC CHIP 0.047 50V
C38	1-106-172-00	s	MYLAR 0.001 5% 100V
C39	1-108-611-00	s	MYLAR 0.22 5% 50V
C40	1-106-180-00	s	MYLAR 0.0022 5% 100V
C47	1-106-192-00	s	MYLAR 0.0068 5% 100V
C55	1-124-584-51	s	ELECT 100 20% 10V
C64	1-106-192-00	s	MYLAR 0.0068 5% 100V
C67	1-106-188-00	s	MYLAR 0.0047 5% 100V
C68	1-106-192-00	s	MYLAR 0.0068 5% 100V
C71	1-106-188-00	s	MYLAR 0.0047 5% 100V
C73	1-130-014-00	s	FILM 470PF 5% 50V
C75	1-123-333-00	s	ELECT 100 20% 25V
C77	1-130-016-00	s	FILM 680PF 5% 50V
C78	1-130-014-00	s	FILM 470PF 5% 50V
C81	1-123-333-00	s	ELECT 100 20% 25V
C85	1-106-180-00	s	MYLAR 0.0022 5% 100V
C88	1-106-180-00	s	MYLAR 0.0022 5% 100V
C90	1-123-333-00	s	ELECT 100 20% 25V
C93	1-107-157-00	s	MICA 27PF 5% 500V
C95	1-108-581-00	s	MYLAR 0.012 5% 50V
C100	1-106-172-00	s	MYLAR 0.001 5% 100V
C104	1-124-584-51	s	ELECT 100 20% 10V
C111	1-123-333-00	s	ELECT 100 20% 25V
C114	1-109-688-00	s	MICA 430PF 1% 500V
C118	1-108-603-00	s	MYLAR 0.1 5% 50V
C127	1-109-683-00	s	MICA 270PF 1% 500V
C131	1-123-333-00	s	ELECT 100 20% 25V
C185	1-123-333-00	s	ELECT 100 20% 25V
C187	1-130-481-00	s	MYLAR 0.0068 5% 50V
C190	1-124-584-51	s	ELECT 100 20% 10V
C194	1-123-333-00	s	ELECT 100 20% 25V
C201	1-123-333-00	s	ELECT 100 20% 25V
C211	1-123-333-00	s	ELECT 100 20% 25V
C215	1-123-333-00	s	ELECT 100 20% 25V
C225	1-106-172-00	s	MYLAR 0.001 5% 100V
C228	1-107-158-00	s	MICA 30PF 5% 500V
C339	1-107-207-00	s	MICA 16PF 5% 500V
C371	1-107-210-00	s	MICA 22PF 5% 500V
C373	1-107-158-00	s	MICA 30PF 5% 500V
C374	1-107-208-00	s	MICA 18PF 5% 500V
C381	1-107-158-00	s	MICA 30PF 5% 500V
C401	1-124-584-51	s	ELECT 100 20% 10V
C411	1-107-208-00	s	MICA 18PF 5% 500V
C413	1-124-584-51	s	ELECT 100 20% 10V
CV2	1-141-246-00	s	TRIMMER

Ref.No.	Parts No.	SP	Description
D2	8-719-815-59	s	1S1555-S
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-156-07	s	RD5.6E-B
D8	8-719-911-19	s	1SS119
D9	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-139-07	s	RD3.9E-B
D17	8-719-911-19	s	1SS119
D19	8-719-911-19	s	1SS119
D20	8-719-911-19	s	1SS119
D21	8-719-911-19	s	1SS119
D22	8-719-139-07	s	RD3.9E-B
D24	8-719-911-19	s	1SS119
D25	8-719-911-19	s	1SS119
D30	8-719-100-05	s	1S2837
D31	8-719-100-05	s	1S2837
D34	8-719-911-19	s	1SS119
D35	8-719-100-05	s	1S2837
D36	8-719-815-55	s	1S1555
D37	8-719-100-05	s	1S2837
D39	8-719-100-05	s	1S2837
D40	8-719-100-05	s	1S2837
D42	8-719-911-19	s	1SS119
D43	8-719-911-19	s	1SS119
D44	8-719-100-05	s	1S2837
DL1	1-415-096-31	s	0.3us
DL2	1-415-372-11	s	1H (NTSC)
DL3	1-415-096-31	s	0.3us
DL4	1-415-162-21	s	50ns(1MHz)
DL10	1-415-096-31	s	0.3us
DL11	1-235-271-11	s	MODULE,WITH TAP
FL1	1-231-578-21	s	LOW PASS
FL2	1-231-294-31	s	BAND PASS
FL3	1-231-357-21	s	LOW PASS
FL5	1-231-580-21	s	HIGH PASS
IC1	8-751-880-00	s	CX188(SONY)
IC2	8-759-200-60	s	TA7060AP(TOSHIBA)
IC3	8-759-990-82	s	TL082CP(TI)
IC4	8-759-908-59	s	CX859(SONY)
IC5	8-759-200-85	s	TC4093BF(TOSHIBA)
IC6	8-759-200-65	s	TC4013BF(TOSHIBA)
IC7	8-759-700-43	s	NJM4558M(JRC)
IC8	8-759-200-81	s	TC4053BF(TOSHIBA)
IC9	8-759-200-68	s	TC4011BF(TOSHIBA)
IC10	8-759-601-87	s	CX187(SONY)
IC11	8-751-211-00	s	CX121A(SONY)
IC21	8-752-201-30	s	CX22013(SONY)
IC22	8-752-006-10	s	CX20061(SONY)
IC23	8-752-006-10	s	CX20061(SONY)
IC24	8-759-200-81	s	TC4053BF(TOSHIBA)
IC25	8-759-324-11	s	HA12411(HITACHI)
L15	1-407-500-00	s	MICRO 4.7mH
L16	1-407-500-00	s	MICRO 4.7mH
L38	1-407-189-xx	s	MICRO 8.2uH
L39	1-407-189-xx	s	MICRO 8.2uH
L71	1-407-188-xx	s	MICRO 6.8uH
L83	1-420-984-00	s	AIR-CORE

Ref.No.	Parts No.	SP	Description
LV2	1-426-191-11	s	BPT
LV11	1-408-547-00	s	VAR,255uH
Q1	8-729-603-50	s	2SC403SP
Q2	8-729-100-66	s	2SC1623
Q4	8-729-603-50	s	2SC403SP
Q5	8-729-113-33	s	2SB733-4
Q6	8-729-663-47	s	2SC1634
Q7	8-729-663-47	s	2SC1634
Q8	8-729-100-66	s	2SC1623
Q9	8-729-100-66	s	2SC1623
Q10	8-729-603-50	s	2SC403SP
Q11	8-729-110-53	s	2SA1005
Q12	8-729-100-66	s	2SC1623
Q13	8-729-603-50	s	2SC403SP
Q14	8-729-663-47	s	2SC1634
Q15	8-729-663-47	s	2SC1634
Q18	8-729-603-50	s	2SC403SP
Q19	8-729-603-50	s	2SC403SP
Q20	8-729-100-66	s	2SC1623
Q21	8-729-100-66	s	2SC1623
Q22	8-729-100-66	s	2SC1623
Q23	8-729-663-47	s	2SC1364
Q24	8-729-190-12	s	2SC2901
Q25	8-729-100-66	s	2SC1623
Q26	8-729-603-50	s	2SC403SP
Q29	8-729-603-50	s	2SC403SP
Q30	8-729-190-12	s	2SC2901
Q31	8-729-110-53	s	2SA1005
Q32	8-729-110-53	s	2SA1005
Q33	8-729-110-53	s	2SA1005
Q34	8-729-110-53	s	2SA1005
Q38	8-729-100-66	s	2SC1623
Q39	8-729-603-50	s	2SC403SP
Q40	8-729-603-50	s	2SC403SP
Q41	8-729-603-50	s	2SC403SP
Q46	8-729-603-50	s	2SC403SP
Q47	8-729-603-50	s	2SC403SP
Q48	8-729-603-50	s	2SC403SP
Q49	8-729-110-53	s	2SA1005
Q53	8-729-603-50	s	2SC403SP
Q57	8-729-110-53	s	2SA1005
Q58	8-729-100-66	s	2SC1623
Q59	8-729-663-47	s	2SC1634
Q61	8-729-603-50	s	2SC403SP
Q62	8-729-603-50	s	2SC403SP
Q70	8-729-100-66	s	2SC1623
Q71	8-729-100-66	s	2SC1623
Q72	8-729-100-66	s	2SC1623
Q73	8-729-900-53	s	DTC144EK
Q74	8-729-900-53	s	DTC144EK
Q75	8-729-900-53	s	DTA144EK
Q81	8-729-100-66	s	2SC1623
Q82	8-729-603-50	s	2SC403SP
Q84	8-729-603-50	s	2SC403SP
Q85	8-729-100-66	s	2SC1623
Q86	8-729-603-50	s	2SC403SP
Q87	8-729-100-76	s	2SA812
Q88	8-729-603-50	s	2SC403SP
Q89	8-729-603-50	s	2SC403SP
Q90	8-729-100-66	s	2SC1623
Q91	8-729-110-53	s	2SA1005
Q92	8-729-603-50	s	2SC403SP
Q93	8-729-603-50	s	2SC403SP
Q94	8-729-100-76	s	2SA812
Q95	8-729-100-66	s	2SC1623
Q97	8-729-901-06	s	DTA144EK
Q98	8-729-901-01	s	DTC144EK

Ref.No.	Parts No.	SP	Description
R85	1-215-428-00	s	METAL 2K 1% 1/6W
R88	1-215-420-00	s	METAL 910 1% 1/6W
R120	1-215-438-00	s	METAL 5100 1% 1/6W
R121	1-215-434-00	s	METAL 3600 1% 1/6W
R123	1-215-438-00	s	METAL 5100 1% 1/6W
R124	1-215-402-00	s	METAL 160 1% 1/6W
R126	1-215-408-00	s	METAL 300 1% 1/6W
R142	1-215-420-00	s	METAL 910 1% 1/6W
R146	1-215-425-00	s	METAL 1.5K 1% 1/6W
R147	1-215-418-00	s	METAL 750k 1% 1/6W
R149	1-215-415-00	s	METAL 560 1% 1/6W
R156	1-215-408-00	s	METAL 300 1% 1/6W
R158	1-215-421-00	s	METAL 1k 1% 1/6W
R162	1-215-424-00	s	METAL 1300 1% 1/6W
R281	1-215-394-00	s	METAL 75 1% 1/6W
R282	1-210-829-00	s	CARBON 5.1M 5% 1/4W
R406	1-215-394-00	s	METAL 75 1% 1/6W
R451	1-215-394-00	s	METAL 75 1% 1/6W
R463	1-215-394-00	s	METAL 75 1% 1/6W
R484	1-215-421-00	s	METAL 1k 1% 1/6W
R485	1-215-421-00	s	METAL 1k 1% 1/6W
R494	1-215-408-00	s	METAL 300 1% 1/6W
R513	1-215-432-00	s	METAL 3K 1% 1/6W
R514	1-215-422-00	s	METAL 1100 1% 1/6W
R525	1-215-394-00	s	METAL 75 1% 1/6W
R536	1-532-605-00	s	LINK IC
REG1	8-759-708-09	s	NJM78L09A
REG2	8-759-700-68	s	NJM79L09A
RV1	1-228-892-00	s	VAR,METAL 22k
RV2	1-228-891-00	s	VAR,METAL 10k
RV3	1-228-888-00	s	VAR,METAL 1k
RV4	1-228-896-00	s	VAR,METAL 220k
RV5	1-228-891-00	s	VAR,METAL 10k
RV6	1-228-890-00	s	VAR,METAL 4.7k
RV7	1-228-890-00	s	VAR,METAL 4.7k
RV8	1-228-889-00	s	VAR,METAL 2.2k
RV9	1-228-890-00	s	VAR,METAL 4.7k
RV10	1-228-892-00	s	VAR,METAL 22k
RV11	1-228-889-00	s	VAR,METAL 2.2k
RV12	1-228-890-00	s	VAR,METAL 4.7k
RV13	1-228-887-00	s	VAR,METAL 470k
RV14	1-228-895-00	s	VAR,METAL 100k
RV15	1-228-890-00	s	VAR,METAL 4.7k
RV16	1-228-891-00	s	VAR,METAL 10k
RV17	1-228-890-00	s	VAR,METAL 4.7k
T1	1-426-189-11	s	BPT
T2	1-426-185-11	s	BURST,AMP
T10	1-411-100-00	s	BPT-1
TH1	1-800-197-00	s	S-400
X2	1-527-376-00	s	OSC.CRYSTAL 3.579545MHz

YC-24 BOARD

Ref.No.	Parts No.	SP	Description
	A-6711-545-A	o	MOUNTED CIRCUIT BOARD,YC-24
C5	1-124-584-41	s	ELECT 100 20% 10V
C8	1-124-584-41	s	ELECT 100 20% 10V
C20	1-124-445-00	s	ELECT 100 20% 16V
C37	1-124-584-41	s	ELECT 100 20% 10V
CN625	1-508-934-00	o	RECEPTACLE,3P
	1-509-984-00	o	HOUSING,3P
	1-509-982-00	o	CONTACT
DL1	1-415-096-31	s	0.3us
FL2	1-231-581-21	s	HIGH PASS
FL3	1-231-579-21	s	LOW PASS
FL4	1-231-994-21	s	LOW PASS
IC1	8-743-890-00	s	BX389(SONY)
IC2	8-743-511-00	s	BX351A(SONY)
L12	1-408-421-00	s	MICRO 100uH
L13	1-408-421-00	s	MICRO 100uH
L14	1-407-498-00	s	MICRO 3.3mH 5%
LV1	1-411-107-00	s	PEAKING
LV2	1-411-107-00	s	PEAKING
Q1	8-729-100-66	s	2SC1623
Q7	8-729-600-24	s	2SC403SP-51
Q8	8-729-600-24	s	2SC403SP-51
Q9	8-729-600-24	s	2SC403SP-51
Q10	8-729-600-24	s	2SC403SP-51
Q11	8-729-600-24	s	2SC403SP-51
Q13	8-729-100-66	s	2SC1623
R44	1-215-406-00	s	METAL 240 1% 1/6W
R47	1-215-414-00	s	METAL 510 1% 1/6W
RV2	1-228-889-00	s	VAR,METAL 2.2k
RV3	1-228-890-00	s	VAR,METAL 4.7k
RV4	1-228-890-00	s	VAR,METAL 4.7k
RV5	1-228-888-00	s	VAR,METAL 1k
RV6	1-228-889-00	s	VAR,METAL 2.2k

Ref.No.	Parts No.	SP	Description
FRAME			
	1-586-633-11	s	CONDENSATION SENSOR
CN1001	1-563-029-21	s	RESEPTACLE XLR 3P(F) "MIC CH-1 IN"(UC)
	1-563-030-21	s	RECEPTACLE XLR 3P(M) "MIC CH-1 IN"(J)
CN1002	1-563-029-21	s	RESEPTACLE XLR 3P(F) "MIC CH-2 IN"(UC)
	1-563-030-21	s	RECEPTACLE XLR 3P(M) "MIC CH-2 IN"(J)
CN1003	1-560-999-11	s	RECEPTACLE 4P WITH SW "DC IN"
CN1004	1-507-410-00	s	RECEPTACLE F-TYPE "RF OUT"
CN1005	1-561-040-00	s	RECEPTACLE 14P "CAMERA"
CN1006	1-507-251-XX	s	JACK "EARPHONE"
CN1007	1-509-176-31	s	RECEPTACLE XLR 3P(M) "AUDIO CH-1 OUT"(UC)
	1-509-184-31	s	RECEPTACLE XLR 3P(F) "AUDIO CH-1 OUT"(J)
CN1008	1-509-176-31	s	RECEPTACLE XLR 3P(M) "AUDIO CH-2 OUT"(UC)
	1-509-184-31	s	RECEPTACLE XLR 3P(F) "AUDIO CH-2 OUT"(J)
CN1009	1-561-781-41	s	BNC "VIDEO IN"
CN1010	1-561-781-41	s	BNC "VIDEO OUT"
CN1011	1-507-195-21	s	JM-25 JACK "REMOTE"
CN1012	1-507-312-00	s	RECEPTACLE 10P FOR RF MOD
H1001	A-6709-463-A	s	DUH-28A-R HEAD DRUM ASSY
	A-6709-465-A	s	DUR-28-R UPPER DRUM ASSY
H1002	8-825-578-21	s	EPS264-5803 "CTL R/P/AUDIO CH-1 ERASE /AUDIO CH-1/CH-2 R/P"
H1003	8-825-544-20	s	EF248-58 "FULL ERASE"
M1001	8-838-079-01	s	DC BHF-1913A "CAPSTAN"
M1002	8-835-123-01	s	DC MNR-7400A "REEL"
M1003	1-541-163-00	s	DC "THREADING"
M1004	8-835-030-01	s	DC MNR-2900A "DRUM"
ME1001	1-520-476-21	s	"AUDIO CH-1/VIDEO LEVEL"
ME1002	1-520-476-11	s	"AUDIO CH-2 LEVEL"
ME1003	1-520-477-11	s	"BATTERY LEVEL"
PM1001	1-454-386-11	s	"PINCH"
PM1002	1-454-383-11	s	"T-BRAKE"
PM1003	1-454-382-11	s	"TENREG"
PM1004	1-454-383-11	s	"S-BRAKE"
PM1005	1-454-381-11	s	"T-IDLER"
PM1006	1-454-381-11	s	"S-IDLER"
S1001	1-553-246-00	s	TOGGLE "POWER"
S1002	1-570-028-11	s	MICRO "CASSETTE IN"
S1003	1-570-028-11	s	MICRO "MISS REC"
S1004	1-570-028-21	s	MICRO "CASSETTE LOCK"
S1005	1-570-028-11	s	MICRO "THREAD END"
S1006	1-570-028-21	s	MICRO "EJECT"
S1007	1-570-028-11	s	MICRO "UNTHREAD END"

15-4. PACKING MATERIAL AND ACCESSORY (SUPPLIED)

Parts No.	SP	Description
1-504-059-11	s	EARPHONE,MAGNETIC(ME-20H)
1-557-547-11	s	COARD,CONNECTION (CCQX-2)
3-698-917-01	o	BELT,SHOULDER (SINGLE)
3-686-008-01	o	CUSHION,(LOWER)
3-686-096-01	o	CUSHION CUPPERI
3-686-097-01	o	SPACER
3-686-098-01	o	INDIVIDUAL CARTON
3-687-942-01	s	CASE,SOFT
3-701-630-01	s	BAG,POLY (FOR MANUAL)
3-773-981-23	s	MANUAL,INSTRUCTION
4-885-820-00	s	BAG,PROTECTION

15-5. FIXTURE (OPTIONAL)

Parts No.	SP	Description
J-6001-820-A	s	DRUM ECCENTRCITY GAUGE (3)
J-6001-830-A	s	DRUM ECCENTRCITY GAUGE (2)
J-6001-840-A	s	DRUM ECCENTRCITY GAUGE (1)
J-6001-930-A	s	DRUM ECCENTRCITY GAUGE (4)
J-6002-270-A	s	REEL TABLE TORQE MEASUREMENT TAPE (40 MM DIA)
J-6009-830-A	s	FLATNESS PLATE
J-6080-013-A	s	DIHEDRAL ADJUSTING SCREW
J-6080-029-A	s	SMALL MIRROR FOR ADJUSTMENT
J-6080-030-A	s	SPARE MIRROR
J-6130-010-A	s	REEL TABLE HEIGHT CHECK BASE JIG
J-6130-020-A	s	REEL TABLE HEIGHT CHECK JIG
J-6152-450-A	s	CLEARANCE CHECK GAUGE
J-6152-560-A	s	TAPE GUIDE SLANTNESS CHECK TOOL
Y-2031-001-0	s	CLEANING FLUID
J-6011-820-A	s	CLEANING PIECE
3-702-390-01	s	ECCENTRIC SCREW DRIVER (4 MM DIA.)
7-732-050-20	s	TENTION SCALE (50 G FULL SCALE)
7-732-050-30	s	TENTION SCALE (100 G FULL SCALE)
7-732-050-30	s	TENTION SCALE (500 G FULL SCALE)
8-960-015-04	s	ALIGNMENT TAPE, RR5-3SA
9-911-053-00	s	THICKNESS GAUGE
1-937-087-11	s	HARNESS,EXTENSION(A) 2P
1-937-087-21	s	HARNESS,EXTENSION(B) 3P
1-937-087-31	s	HARNESS,EXTENSION(C) 4P
1-937-087-41	s	HARNESS,EXTENSION(D) 5P
1-937-087-51	s	HARNESS,EXTENSION(E) 6P
1-937-087-61	s	HARNESS,EXTENSION(F) 8P
1-937-087-71	s	HARNESS,EXTENSION(G) 9P
1-937-087-81	s	HARNESS,EXTENSION(H) 10P
1-937-087-91	s	HARNESS,EXTENSION(I) 12P
1-937-088-11	s	HARNESS,EXTENSION(J) 14P